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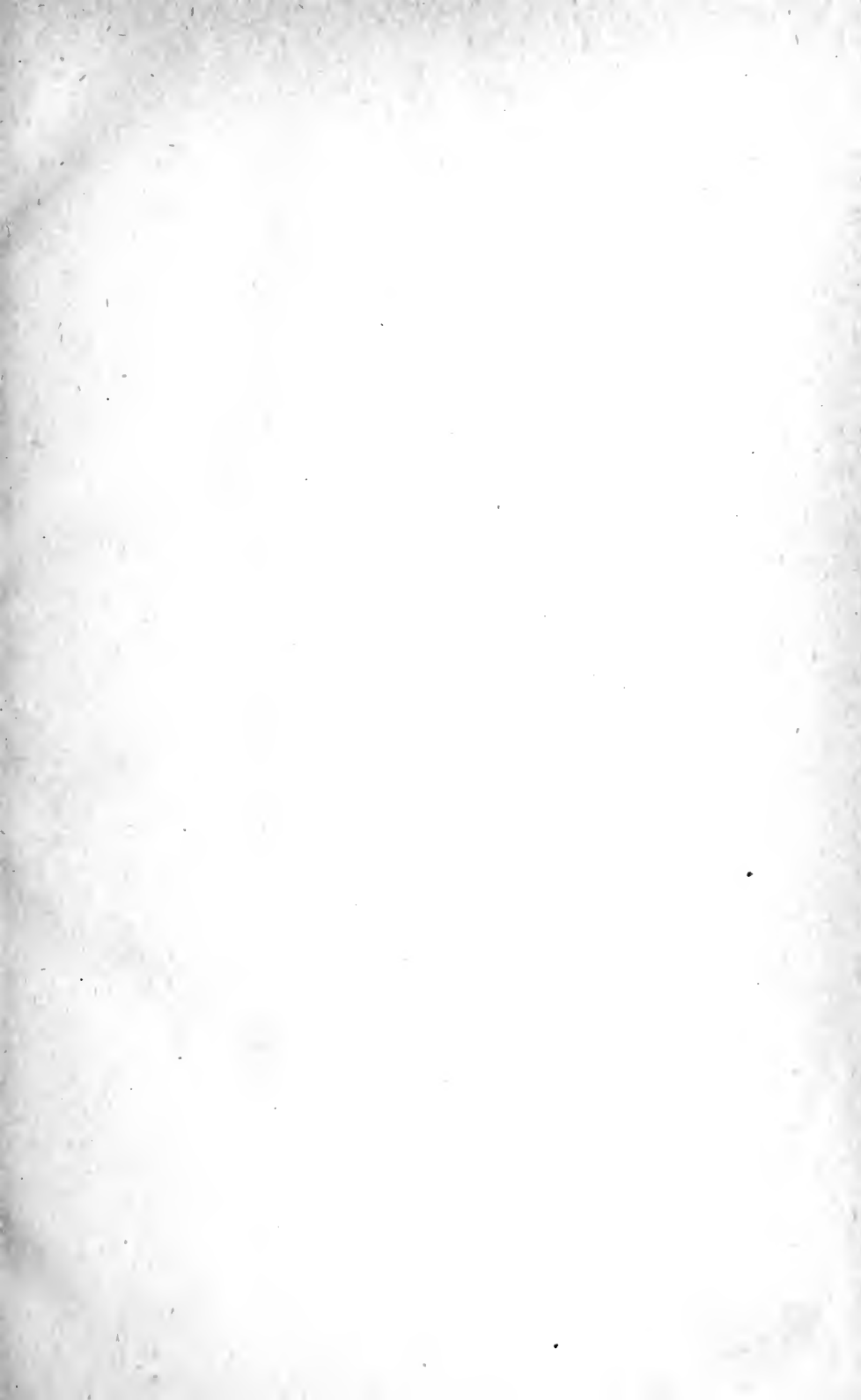
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ROYAL COLLEGE OF

DENTAL SURGEONS OF ONTARIO,







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Died,

In Paris, December 30th, 1879,

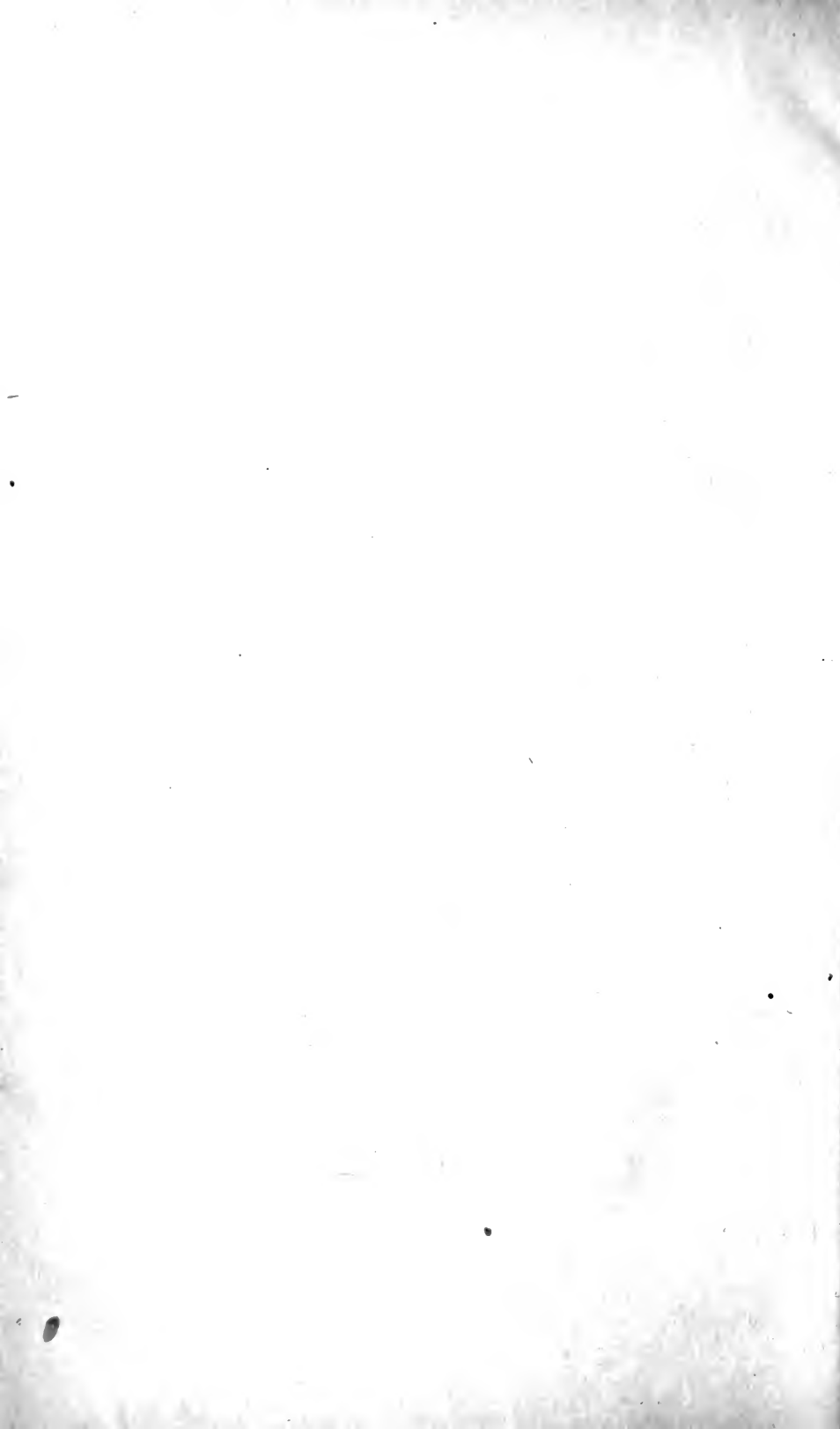
Samuel Stockton White,

AGED, 57 YEARS.

We learn with deep regret of the death of Dr. Samuel S. White of Philadelphia, which occurred in Paris, France, on the 30th ult. We have no knowledge of the immediate cause of his death, but it is well known that his health has been far from good for several years.

Dr. White, by his indomitable energy and shrewd business tact, for many years has been the leading manufacturer of dental goods in the world. Probably no other business man has been so widely known, or has enjoyed such an unblemished reputation for integrity and fair dealing as has the subject of this brief obituary. His death is a great loss to the dental profession, not only in this country, but wherever dentistry is practiced.

We have no data for an extended notice, but will procure them for the next issue of this Journal.



THE DENTAL ADVERTISER.

VOL. XI.—BUFFALO, N. Y., JANUARY, 1880.—No. 1.

ABSORPTION OF ROOTS OF DECIDUOUS TEETH.

Read before the Seventh and Eighth District Dental Societies of New York, October, 1879,

BY W. E. ROYCE, D. D. S.

In a paper read before this Society last October, I made the statement that "the absorption of the root of the temporary tooth depends upon the life of the pulp, and ceases if by any means that life is destroyed." To my surprise, when the paper was discussed, I found myself standing nearly or quite alone upon this point. Therefore, I at once determined that at the first favorable opportunity I would give some of my reasons for thinking as I do upon this subject.

During the last few years much time has been spent upon the study of the histology of the teeth, and with each discovery it has been more clearly proven that the teeth are largely composed of living vascular tissues. Some years since, John Tomes demonstrated that each dentinal canaliculus contained a fibril of living matter. Within the past year Dr. Bödecker has shown that from these fibrils, offshoots penetrate the basis substance of the dentine, forming a network of living matter throughout its entire extent. That these fibrils and their offshoots do exist there can be no doubt. That teeth are nourished, and that lime salts continue to be deposited, even in the periphery of the dentine after they are fully erupted, will not be denied. Putting these facts together, are we not justified in saying that the chief office of the fibrils and their offshoots is to nourish the dentine? Or, we might say they form avenues through which the nutritive material passes.

The cementum resembles the dentine in being a living tissue, but it receives its vitality through the pericementum. It is true that a few of the smaller branches of the fibrils of the dentine enter the cementum, but it must live independent of the pulp of the tooth, as we often find living cementum in contact with dentine which has long been dead.

Nutrition and absorption usually go hand in hand, and in this respect the teeth form no exception to the rule. It is a well established fact that in pregnancy or in long continued emaciation, the teeth suffer with the rest of the system. Absorption is a living process, and although the cell which nature desires to rid herself of may possibly be dead, the avenue through which this cell is removed must be alive. If we extract the teeth, nature sets up a process by which the alveolar process is absorbed, but if in the operation a piece is so injured that it dies, it will not be absorbed, but must be removed, either by chemical or mechanical means.

In considering the deciduous teeth, we should remember that they differ from the permanent teeth chiefly in being more vascular. If, then, the deciduous teeth are composed of living vascular tissues, is it not reasonable to assume that the absorption of their roots resembles the absorption of other vital tissues?

Mr. Spence Bate asserts that "any vascular tissue on assuming an increased degree of vascularity, may exercise the function of absorption." If we accept this statement, the explanation of the process of absorption becomes most simple. The pulp at the apex of the root becomes more vascular. This vascularity extends to the pericementum, which becomes the absorbent organ of the cementum. When the cementum is removed from the apex of the root, this vascularity continues in the pulp. The office of one fibril after another is changed from nutrition to absorption. The lime salts are removed, and the mass which has been called the absorbent organ remains.

John Tomes, who has given this subject much attention, says in regard to Mr. Bate's theory: "It would appear rather that wherever the necessity for the removal of osseous tissue arises, the structure capable of fulfilling the office is developed, and that the seat of the development may be in any vascular structure." But that he deems Mr. Bate's theory worthy of consideration is manifest from the following remark which we find upon page 79 of his *Dental Surgery*. In speaking of a layer of dentine, he says: "This is, however, eventually removed, and the pulp itself changes its character, and becomes an absorbent organ, or makes way for that which is." Either theory proves our point equally well, for it would be absurd to suppose that a dead pulp could be the seat of development of an absorbent organ, or that it could change its character, and itself become the absorbent organ. Upon page 69, Mr. Tomes illustrates how a first bicuspid may be driven outwards by the unabsorbed roots of a dead deciduous molar.

Upon page 398, July number *Cosmos*, Dr. Atkinson is reported as saying, speaking of children's teeth, the process of solution and absorption of the roots is arrested the moment the pulp is killed. In studying absorption, we must be careful not to confound it with simple chemical action. A tooth may die, an alveolar abscess be formed, and the roots being bathed in an acid pus, may to a certain extent be destroyed, but here the appearance of the root indicates not absorption, but chemical action. It is attacked wherever the pus comes in contact with it, and presents a worm-eaten appearance.

Cases sometimes occur in which absorption commences on the side of the root, half-way between the apex and the crown. Here of course the pericementum is concerned and not the pulp; in fact, absorption may continue for a time after the pulp is dead, for we have seen that we may have living cementum in contact with dead dentine, but the action at once ceases upon reaching the dead dentine.

These are some of my reasons for believing that the absorption of the roots of the deciduous teeth is a physiological process, and that in order that it may be fully accomplished it is necessary that the pulp retain its vitality.

Brockport, N. Y.

THE GARDNER CASE.

This case, which has attracted such universal notice and comment, was first stated in the *New York Times* of October 6th, under the following sensational heading: "*Poison in a Tooth.—What caused the horrible death of Mr. Gardner.—A man's head nearly severed from his body by decay caused by arsenic which had been placed in one of his teeth to deaden an aching nerve.*"

That this should have produced a startling effect on the public is not surprising, especially when followed by the remarkable statements contained in this article itself. It did not, however, surprise the members of the profession, as evidence of *arsenical* poisoning were sadly wanting in the statement.

To give a clear understanding and connected history of the affair, we give copious extracts from the original article, together with statements made by Dr. Geo. F. Waters and Dr. C. A. Marvin, the gentlemen suspected as having placed the arsenic in the tooth; also extracts from a clever criticism in relation to the case by Prof. J. Taft, in the *Dental Register*. It is perhaps almost needless for us to say that it is the general belief of the members of the profession that Mr. Gardner did not die from arsenical poisoning; that he did die from pyæmia is quite evident.

To those who do not know either Dr. Waters or Dr. Marvin, we would state that they are both gentlemen of high professional and social character

and integrity, just such men as can be entrusted with any case, however complicated. By this we do not intend to reflect on Mr. Gardner's attending physicians, or the "medical scholar" who has made himself so conspicuous, but to simply say that we *know* that the statements made by Drs. Waters and Marvin can be relied on as being facts, free from all sensational garnish.

The *New York Times* stated that "Mr. George Arthur Gardner, nephew (by marriage) of Prescott, the historian, died in Brooklyn, on the 27th ult., in great agony, after two weeks of indescribable suffering. It is said by his attending physician that his death was caused by arsenical poison placed by a dentist in one of his teeth for the purpose of killing an aching nerve. The certificate of death, which was filed with the Department of Health of Brooklyn by Dr. Samuel S. Guy, of No. 302 Clinton street, states that the cause of death was 'gangrene of mouth and face, arising from treatment of a tooth.' Mr. Gardner was nearly 50 years old, a married man, and by occupation a civil engineer.

"Mr. A. C. Lewis, of No. 296 Lafayette avenue, who had been with Mr. Gardner during all the time of his illness, and knew more about the case than anybody else, being a medical scholar, was competent to speak about it. * * * * *

"I didn't know before that the use of arsenic was so common among dentists. They nearly all use it. They ought to be compelled to quit using it altogether."

After giving a brief description of the personal appearance of Mr. Gardner, Mr. Lewis continues: "He (Gardner) had business in New York, and started from Boston on Thursday. He reached his boarding-house on Friday morning. On Saturday he sent for me and I found him suffering greatly. He said it was an ulcerating tooth, and I thought it was. I could see what I thought was the pustule of an ulcer about ready to break. I treated him for an ulcerated tooth. The next day, Sunday, the ulcer broke, yielding a yellowish substance and an offensive smell. I then found that Gardner's tongue was curled up rigidly, and retained this position until death. Under the tongue was a large scar, which I knew must have been burned with something as strong as creosote at least. At this time his right cheek was black and swollen, both eyes were closed with swelling, and the jaws set, with the teeth about a quarter of an inch apart. The pus emitted increased in volume and odor, and every symptom of arsenical poisoning showed itself. Gardner being conscious all the time, I questioned him closely. He said that on Thursday he was suffering severely from toothache, and went to his cousin, in Boston, Dr. Waters. Dr. Waters, thinking there was no nerve in the tooth, filled it with a rubber plug, which he forced in to keep out the air. But Gardner couldn't stand the pressure of the plug on the sides of the sensitive tooth, and he

returned to Dr. Waters later in the day. And that time he told the Doctor that he intended to start that night for New York, and that he wanted the tooth fixed up so that it would not annoy him. Dr. Waters then filled it with something and capped it. On the boat his tooth and head troubled him so much that he could neither sleep nor rest. Early Friday morning he called on a physician in Brooklyn, who advised him to go to a dentist, and he went to Dr. Marvin. Gardner said that it appeared to him that Marvin treated his tooth just as Waters had. Both Dr. Guy and myself called three times on Marvin. He once admitted that the Boston dentist might have used arsenic, but he refused to say anything about himself except that he had 'treated the tooth scientifically.'

"No man ever died such a terrible death as Gardner. When he was dead every connection between his head and body, except the spine, had been eaten through and completely severed by the action of the poison. Every time a blood-vessel was thus severed there would be a new hemorrhage. A few days before he died one of these hemorrhages suddenly occurred, and the blood spouted up into the attendant's face. The sloughing of the decayed parts was so great that four incisions had to be made into his neck to keep his throat clear. Through these incisions we had continually to draw out the sloughed parts, and they came in long strips like soft gum, and had to be broken off. * * * * *

"Dr. Richardson, of Henry Street, Brooklyn, on the 25th ult., and Dr. Helmuth, of New York, on the 26th, both agreed with Dr. Guy as to the cause of the disease. Dr. Helmuth said the case was absolutely hopeless, and had been from the start. He pronounced it the most marked case of arsenical poisoning of the kind that had ever come under his notice, and said that there could not be any doubt that the poison had been placed in a tooth to kill a nerve, and that medical literature did not contain another case of the kind quite as clear in every respect. In treating such cases, one of the last resorts of the physician is to attempt to offset the arsenic by administering lachesis, the active poison of the rattlesnake. While that treatment was being used on Gardner, I took two different pieces of the sloughed parts to chemists, and had them analyzed. Each analysis showed that even then the arsenic was the predominating poison. I intend to have Mr. Gardner's jaw-bone exhumed, and if Dr. Waters is worth suing, I mean to make him pay for his mistake."

DR. WATERS' STATEMENT REGARDING HIS TREATMENT OF MR. GEORGE ARTHUR GARDNER.

[From the Missouri Dental Journal.]

Dr. Waters, of Boston, makes the following statement regarding his treatment in the case of Mr. George Arthur Gardner, of New York, whose recent death has attracted such wide-spread attention :

A great deal is being printed about the painful death of my kinsman and occasional patient, Mr. George Arthur Gardner, of New York. In such a case the investigations and discussions, instead of being conducted by irresponsible newspaper reporters, who publish, with more or less accuracy, the results of random interviews, should be made by the legal authorities, and with due formality. I beg permission to say this much, at this stage of the *quasi* investigation, in your columns :

Mr. Gardner came to my office on the 9th of September (I not having seen him for eight months previously), suffering from neuralgic pains in the head and jaws, which he referred to a decayed tooth in the right inferior maxilla, that had been giving him trouble for three or four weeks. He said two dentists had made applications to the tooth at different times within three weeks, but without giving him much relief. Noting a soft, silky shimmer of the skin of his face I asked after his general health, and found that as good as usual, with the exception above noted. He seemed sure that the pulp of his tooth was in a high state of inflammation, and asked me to make an application for the purpose of allaying inflammation before operating, as he feared the pain. On examination, I found *no* exposure of the pulp, nor any apparent opening into the pulp chamber from this cavity. But a dark circle around a gold filling in the crown looked suspicious, and, as it had a dark line extending forward to near the edge of this cavity, with a decided cloudiness bordering either side, I inferred the trouble to be located there. I found, upon removing the gold filling, a very extensive decay beneath and around it, penetrating the pulp chamber, which was filled with fine particles of food in a putrid condition. This was all carefully and thoroughly removed, and the discolored walls cut away so as to give free access to the pulp canals in the roots, in one of which I found a small portion of live pulp. The others were filled with a mass of foetid matter, which was very carefully and thoroughly removed and the whole treated to a bath of bi-sulphate of soda, and that was followed by a very thorough washing with the saturated *aqueous* solution of carbolic acid. These materials were allowed ample time in which to do their work of disinfection and deodorization, and then the canals were filled with the soft, oily vaseline, and that protected by the form of oxy-chloride of zinc, called agate cement. When this had become sufficiently hard, the remainder, and by far the larger part, of the cavity was filled with Hill's stopping—a preparation of gutta percha. When I announced the completion of the filling Mr. Gardner seemed much surprised, and said that he had experienced no pain except when I was cleaning the canal, in which was a portion of live pulp, and that was of momentary duration. I was very careful not to wound the nutrient vessels of this small portion of humanity. Mr. Gardner was told that the entire operation was of a temporary nature, as the tooth was in an exceedingly precarious condition, and any operation while in this

state, save that of extraction and replacement, would be of very doubtful duration. I also said that I wished to see the tooth again, in any event, before he went to New York that evening, that I might judge of the expediency of further treatment. In a few hours he came in again and said he thought I would have to loosen the filling a little, as he could not stand the pressure. I removed the gutta-percha, oxy-chloride of zinc, and washed out the vaseline. Then, fitting a piece of cork to the cavity, I made traction through it with a small syringe upon the contents of the dental canals. And, as it gave immediate relief, I decided that there was probably an oozing from the ruptured pulp vessels, and that it would consequently be improper to close the canals tightly, but that food and saliva must be kept out; so, after again washing with the saturated *aqueous* solution of carbolic acid, and applying a small quantity of nitrate of silver to the canals, I filled loosely the large cavity with Japanese bibulous paper, super saturated with vaseline, to the entire exclusion of air and moisture, yet not so as to prevent any gases or exudations that might develop in the roots from passing into the buccal cavity.

The same piece of cork was placed in the mouth of the cavity as a cover to the soft filling, and this condition was found by Dr. Marvin, as the papers have said, intact. If I had been in the habit of using arsenic, which I discarded 20 years since, and was entirely unscrupulous as to its use, and had the arsenic at hand, I should *not* have used it in such a case. I saw no indication that arsenic had been used at all. There was no sloughing of gums between the bicuspid and this molar, as there would doubtless have been if arsenic had been applied to this dishing mesial cavity, at the treatments which it received previous to his calling upon me. If there had appeared an opening into the pulp chamber from this cavity, I should have suspected the use of arsenic and removed the tooth for treatment as the only way of reaching the trouble. The indications of inflammation around the roots were not strongly marked when he called upon me, nor when he left, but yet sufficient to warn me of what might possibly occur, and accordingly I gave him positive instructions, if the pain returned to him, to have the traction treatment of the canals used again by the first dentist at hand, as by it the inflammatory symptoms seemed to be readily reached and controlled. Up to the time when Lewis was called in, on Saturday, there is nothing to show that Mr. Gardner was suffering from anything more serious than a severe and very troublesome alveolar abscess, the pointing of which Mr. Lewis says he saw and treated. Just what his treatment was we are left to infer by the subsequent results. A dentist would have opened the abscess and removed its contents, disinfecting and cleaning it to its source, even to the canals of the roots of the tooth. Every dentist must have occasion to treat cases very much worse than anything described by Mr. Lewis at his first meeting with this case.

Just here we want more light, and these questions suggest themselves: What time Saturday did Lewis see the case? What was his treatment? Is he a medical student engaged in dissecting? Did he make a feeble attempt to open up that abscess? And if so, what with? An instrument used in dissecting? How long, in hours, was it from the time of viewing the case Saturday to the time in which he saw such dire results and condition on Sunday, when the pyæmia was marked and gangrene followed? Such a condition would be likely to result from the use of a dissecting knife that had not been properly cleaned, if used on tissues so engorged and clogged with effete matter.

I know of no other way in which such results could be obtained. I have seen and treated recently some bad cases of arsenical poisoning. The treatment is simplicity itself, as compared with that with which we have to combat the pyæmia of a dissecting wound. I am talking necessarily at random. Up to Saturday, the case was not, apparently, uncommon nor difficult to comprehend. What happened to him in the hands of this inexperienced medical student we do not know; we only know the sad results. For myself, I know, from more than thirty years of experience, that Mr. Gardner did not suffer harm from my treatment.

GEORGE FRANKLIN WATERS.

Boston, No. 8 Beacon St., Oct. 10, 1879.

DR. C. A. MARVIN'S STATEMENT OF THE CASE OF GEORGE A. GARDNER.

[From Johnston Dental Miscellany.]

The horrible story of the death of this gentleman, attributed to poisoning by arsenic placed in a tooth to kill the nerve, has caused great excitement throughout the community, as well it might, and a wide spread alarm for which there is no foundation. Arsenic, in the form of arsenious acid, has been used more or less extensively for this purpose for forty years. It was introduced to the notice of the profession by Dr. S. Spooner, of New York, in 1836, whose brother, a dentist in Montreal, is said to have been the first to employ it in dental practice. When used carefully, it has proved to be safe and efficacious and has relieved an immense amount of human suffering; and when used without care, its injurious effect, when any has supervened, has been local and limited. Alveola abscesses are not of infrequent occurrence, but are traceable to an entirely different cause, as is well known. They are liable to occur under any dead tooth, whether the pulp of that tooth has died a natural death or has been destroyed by a corrosive or caustic agent. Great care is observed, therefore, to bring about a healthy condition of things before attempting to fill a tooth from which the pulp has been extirpated. All this is well known. Mr. Gardner's case did not present any alarming, nor even any peculiar symptoms when I first saw it. It was simply

a case of periosteal inflammation, accompanied by a slight, a very slight swelling of the gum. The tooth—a right lower molar—was sore to the touch, and was painful without being touched. Upon a casual examination, it was deemed best to remove the temporary filling, which might be the cause of irritation, and so give relief. This was done, the cavity cleansed, and an application of creosote made. The patient was then advised to return as quickly as possible to his dentist. The next I heard of the case was several days after, when the physician called and inquired what I knew about it, what treatment I had employed, and what I thought the former dentist had used? He then advanced the opinion that it was arsenical poisoning. I did not agree with him, and when he described the man's condition, concluded that he was suffering from an alveola abscess. I did not see him. The next I heard, was from the sensational story of his death in the *Times*, October 6, some two weeks afterwards. That alarming history, taken from the lips of the two gentlemen whose names appear therein, with great regard for accuracy, so I am informed, was based on the positive assertion that the arsenic employed to destroy the nerve of the man's tooth was the certain cause of his death, and this went like lightning throughout the land, spreading terror, exciting indignation, causing distrust of a useful profession. The story was emphasized by severe editorials, and dentists and dentistry unjustly defamed. Dr. Waters, of Boston, has published a long article detailing the condition of the tooth, his treatment of it, and his apprehensions concerning it. He positively avers, that he used no arsenic. Now, I used none, therefore it follows that there could be no arsenical poisoning, and the cause of the gentleman's death must be looked for elsewhere.

In my judgment, Mr. Gardner was not in a state of constitutional vigor. His skin had an unhealthy color; there was a lack of firmness of texture, and a general appearance of atony about the tissues of his cheeks and neck, indicating easy and rapid solution of the soft parts under the attack of any ulcerative affection.

The abscess, in its earliest incipency, when I saw it, was allowed to go on unchecked for several days before medical skill was summoned. Its progress was phenomenally rapid; its character unnaturally malignant. What might perhaps have yielded to thorough treatment at the first, soon became violent and uncontrollable; complicated, undoubtedly, with constitutional ailment, it assumed new and alarming phases, was not recognized by the physician, and ran its own wild course swiftly to the fatal end. There is very little doubt that erysipelas joined with its malignant force, and tissue and strength melted away before them like snow before a flame.

There is room for much speculation in connection with this case. There has been much. The most of it has been vain. Some things are

fixed, however, and no assertions nor charges can shake them, with informed men.

One is, that arsenious acid, as employed by dentists, could never produce such a result. Its effect is totally different even when brought in contact with gum edges and process surfaces.

Another is, that alveola abscesses are not to be neglected nor tampered with. Although in themselves not usually nor necessarily fatal, they often do destroy the bony parts, causing suffering, the necessity of surgical operations, and permanent deformity. Especially do the diseases of the teeth demand immediate attention in patients who are suffering from any constitutional disease, which lowers the tone of the system, and reduces the power of resistance. Another is, that dental surgery can and does meet the wants of such cases, and has scores of cures to its credit.

Another is, and it is very gratifying to consider, that among competent men, notwithstanding many differences and much contradiction, there is at the bottom a unity of opinion on vital questions and governing principles, when once it is dragged to the surface and correctly reported.

We close the history of this extraordinary case with an extract from an editorial by Prof. Taft in the *Dental Register* :

“The first we have of Dr. Guy’s charge of arsenical poisoning, is to the *Times* reporter during his investigation, to whom Dr. Guy said, ‘Mr. Gardner did die from the effects of arsenical poison, introduced into his system as a result of the treatment of his tooth, and there isn’t the slightest doubt about it ; it is a clear case.

The proper medical statement of the cause of his death, is that he died of septicæmia, following gangrene of the mouth and face caused by arsenic, placed in a tooth during treatment.’

How did Dr. Guy know this ?

And if this was the proper medical statement of the cause of Mr. Gardner’s death, why was it not embodied in the certificate of Dr. Guy to the health officer ? Is it possible that a case, so terrible in all its aspects, as this doubtless was, should have been due, in its beginning, in its awful continuance and its fatal result to arsenical poisoning, and yet this fact not be mentioned in the certificate of death ? This should have been done irrespective of the method of the administration of the arsenic. Much more should it have been done if it had been administered through criminal carelessness.

Dr. Guy further states, ‘I did not see Mr. Gardner until the 15th of September, four days after he was attacked. The poison had then been actually absorbed.’

A very remarkable statement indeed, for one to make, who did not know whether arsenic had been used at all or not, and how very searching

his investigation must have been, to enable him to recognize and know, four days after the administration, 'that the poison had been actually absorbed.'

It would be very interesting indeed, if Dr. Guy would inform us, how this absorption took place. Was it through the canal of the tooth? Was it through the dentine and cementum? Or did it escape in part or in whole from the cavity into the mouth, and there dissolve in the saliva—it could not be absorbed till dissolved—arsenic is very sparingly soluble in saliva. Or did this imaginary fortieth to a sixtieth of a grain of arsenic pass into the stomach, and enter the system through that channel, enter the circulation and perpetrate its awful ravages upon the mouth and neck of the victim as described? What nonsense."

TOOTHACHE AND NEURALGIC PAINS.

During the last ten years I have not met with a single case in which I have not been able to give either decided relief or effect a permanent cure. The means employed, no doubt, are familiar to many, but I am certain they are not generally known, and therefore the following, although not absolutely new, will be practically so to many.

Where the nerve of a tooth is diseased or exposed, I gently clear the cavity without excavating, dry it with amadou or absorbent wool, and then apply carbolized resin on a small ball of wool, sealing over with a very thin sheet of wax. The sealing is not absolutely necessary, as the carbolized resin is almost insoluble. I give the patient a small tube containing a few drops of the carbolized resin, with instructions to change the plug for a fresh one if the pain is not entirely gone within half an hour. In most, if not all, cases of exposed nerve, a few applications will so entirely destroy the sensitiveness that the tooth may safely be filled without capping.

When the pains are neuralgic, following the track of the nerves on the face and neck, I rub gently with the finger over the track of the pain an ointment composed of veratria twenty grains, lard one ounce. This, of course, is poison, and must be used externally only, avoiding any sores or wounds, and causes a cold tingling sensation a few minutes after application. Its action lasts usually for five or six hours, but if the pain is very severe it should be applied more frequently.

I have tried an ointment made as above, but with vaseline instead of lard, but its action does not appear to be so satisfactory; in fact, vaseline in my hands has proved most unsatisfactory for every purpose to which it has been applied, its one property in not going rancid being not sufficient to compensate for its shortcomings. My stock of it will be applied to lubricating the lathes, for which purpose it appears to be specially suited when mixed with sperm oil in sufficient quantity to make it fluid.—*Thos. Fletcher, in British Journal of Dental Science.*

"A CONTRIBUTION TO THE KNOWLEDGE OF CEMENTS, BY DR. W. H. ROLLINS."

(N. Y. ODONTOLOGICAL SOCIETY.)

How far this can be called a "contribution to knowledge" is hard to tell. No doubt Dr. Rollins has published his experiments in perfect good faith, unfortunately his knowledge is hardly sufficient to be reliable. He says he has been amused to see each new oxychloride of zinc praised whilst old ones like it were given up. If he had taken the trouble to test the solubility of the different samples, he would have found differences so startling and unexpected that a change, even from an oxychloride to an oxychloride, might be a great advance. Further on he says: "I have analyzed two cements which have recently been placed in the market. Their resemblance may possibly show another case of independent discovery." In his first analysis he gives the paste of Fletcher's Porcelain, as phosphoric acid and phosphate of alumina. Even the roughest and most careless testing would have shown him that pyro-phosphate of alumina is used. The difference is that the phosphate is soluble in vinegar or acetic acid, pyro-phosphate is not. This, however, may be a trifle to Dr. Rollins.

He then says, "the silicate of alumina in Weston's cement is inert," yet compares this as an equal discovery with that of the pyro-phosphate of alumina, which is certainly not inert, as the solubility tables given in the DENTAL ADVERTISER, for April, 1879, clearly show. Further than this, Fletcher's Porcelain was in the market long before Weston's was known, and is now the only cement in which the special resistance of *combined* alumina compounds is made use of.

If, as Dr. Rollins says, "Orists will find them cheap and easy to make" they will find what the makers of these compounds have yet failed to find, and what Dr. Rollins has also failed to find, if his instructions for making are correct. Dr. Rollins praises a mixture of oxide of zinc and oxide of magnesium, with phosphoric acid. This mixture was used some years ago in England and was condemned for two faults: 1. The heat evolved during combination. 2. The great expansion of basic phosphate of magnesia, which was quite sufficient to burst open a fragile tooth. All who have experimented with magnesium compounds, (apparently except Dr. Rollins) have given them up as utterly hopeless, both on account of the heating and the expansion, and doubtless Dr. Rollins will follow their example when his experience becomes greater.

The Doctor, as reported in the *Cosmos*, uses the term "*Basic*" oxide of zinc five times over. It is supposed to be understood that he knows what "*Basic*" oxide of zinc is. Unfortunately his wisdom on this point exceeds that of the chemists, who believe at present that there is only one oxide of zinc, varying in mechanical density according to the mode

of preparation. It is of course more *scientific* to use hard words when easy ones will answer; but when chemical terms are used, those who use them should, at least, understand and use them correctly. If the term dense or heavy had been employed, either would have been correct so far as the phosphate cements are concerned; but apparently they would not have appeared scientific enough, and the word "Basic" was substituted. Errors of this kind in a paper treating of chemical processes do not add to the reputation of the writer.

* Much good work has been done by the members of the N. Y. Odontological Society, and it appears almost a pity that such experiments and statements as these should be placed on record. Dr. Rollins has got hold of a subject which is apparently much too large for him to handle efficiently, and his experiments, based on no grounds whatever, and with a serious error in one of his two analyses, are hardly worthy of place beside those of many other members of the Society whose experiments and results are evidently the result of careful and thorough work. The Society, take it for all in all, has done too much good work to be condemned for an occasional mistake, such as Dr. Rollins' paper may be fairly considered.

LIQUID SILEX can be kept in good order by placing the bottle in a saucer with a little water in it, and inverting a tumbler over it. The water prevents access of air, and precludes any evaporation and consequent thickening of the sillex. If the supply of water in the saucer is kept up, the liquid sillex will remain clear and in good working order indefinitely.

MISCELLANEOUS NOTES.

The dentists in convention agree to pull together for another year.—*New Orleans Picayune*.

A dentist broke Mrs. Bragg's jaw in trying to pull a tooth. Her son-in-law, with whom she lives, did not sue the dentist, but later in the day they were seen drinking together.—*Boston Post*.

"**As a general rule**, gold and tin are to be preferred for teeth of a compact tissue, and amalgam and cements of the best quality for soft and friable teeth. With regard to the incisors, I prefer always for artistic reasons, and for the color, plastic fillings, and now more than ever, the excellent cements of Fletcher, to which everyone must some time or another really make a bow of respect."—*Luigi Ribolla, Editor L'Odontologia, Palermo*.

Domestication and Brain Growth.—At the recent meeting of the British Association, Dr. Crichton Browne gave an address on the influence of domestication on brain growth. He had found by experiments that domestication had greatly reduced the brains of the duck, and he argued that men, like ducks, might be fed and housed, fenced about, and exempted from participation in the life struggle, until, like the ducks, they would depreciate in mental capacity. Their bodies might increase in size and succulence,

but their brains would become straitened and withered. Disease and luxury crippled the brains. It was as true as ever that men were perfected through suffering, toil, and conflict, and it was not through affluence and comfort that genuine civilization was attained. It was the civilization, not merely the domestication, of mankind that must be aimed at.

Identification of the Prince Imperial.—The circumstances of the Prince Imperial's death have revived a question which has been somewhat neglected by lawyers and physicians, viz. : the importance of the teeth as a means of identification of deceased persons. The late Prince Imperial had been so much disfigured that identification would have been extremely difficult but that the Prince had had four small cavities in the first molar teeth filled with gold by Dr. Rottenstein, of Paris, and had met with a slight accident in April, 1876, from a blow on the front teeth, which had made it necessary to file the teeth a little in order to smooth the enamel. These constituted signs which are unalterable even by ages; and, as careful dentists keep usually a record of such operations, they afford a means of identification which is unerring, and which, as in the present instance, was of great value, and might, under certain circumstances, be of the highest importance.—*Brit. Med. Jour.*

One Thing at a Time.—In an article on "Mental Reflexes," in the *London Lancet*, Dr. J. Mortimer Granville observes: "A frequent cause of failure in the faculty of attention is striving to think of more than one thing at a time. It is, of course, impossible that the mind should be engaged with two topics at once. The expertness which seems to accomplish this feat is, in fact, a highly developed power of glancing from one subject to another with great rapidity,—a sort of mental trapeze-flying, wherein the performer often gets an ugly fall, and may be permanently disabled. If he escape this calamity, there will probably come a time when he will discover that he has so impaired the power of application that he can scarcely follow a long sentence, or carry out a sustained process of reasoning. Those who are compelled by their daily avocations to practice this flying method of thought should, for their own sakes, make it a rule to read, if possible, aloud—in any case attentively—a chapter or two of some sufficiently engrossing work at short intervals, so as to cultivate the faculty of attention."

The Odor of Human Hair.—In *Le Progrès Medical*, M. Galippe calls attention to the medico-legal value of the odor of the human hair. He asserts that from the simple smell of a lock of hair he can tell whether the lock has been cut from the living subject or whether it has been composed of hair that has fallen out. Hair dressers have acquired this art, which is said never to fail them. Hair which has fallen out has a dull appearance, attributable to disease, and is not easily made up; it has no peculiar smell. The hair of the Chinese has a characteristic odor of musk, which is so persistent that it cannot be concealed by cosmetics, for it cannot be destroyed by washing with potash. The hair of the Chinese has also a reddish tinge, and is polyhedral in section. Hair of hysterical patients has a peculiar and distinguishing odor, which is most perceptible at the approach of a crisis. Certain hair is electrical, the electricity being developed more readily after rubbing. M. Bert states that hair which is turned white from age begins to change color rather at the apex than at the base.

A Miss Roberts, of Steuben County, N. Y., was engaged to be married to a gentleman, of Wayland. She had recently had a set of artificial teeth made by a dentist of that place, and while she was visiting in Wayland last week the dentist called on her and asked how her teeth were lasting. She handed them to him and he put them in his pocket, saying, "You can have these teeth when you pay me for them." Miss Roberts was not able to pay for them just then, and the dentist carried them away. That night the man who promised to make Miss Roberts his wife called to see her, and she sent word down that she could not see him that evening. He insisted upon an explanation,

and Miss Roberts's friends explained. The gentleman went away. Next day he wrote to Miss Roberts that he did not know she wore artificial teeth, and that he could not marry a woman who wore them. Miss Roberts fancies that she can recover \$5,000 from the dentist for the loss of a husband and for annoyance growing out of his taking the teeth from her, and, moreover, that she can recover damages from her late suitor in a breach-of-promise suit.

BOOK NOTICES.

HEATH'S SURGICAL DIAGNOSIS. A guide to Surgical Diagnosis. By CHRISTOPHER HEATH, F. R. C. S., professor of Clinical Surgery in University College; author of "Minor Surgery and Bandaging for Hospital Surgeons and Students," "A Course of Operative Surgery." With 20 large Colored Plates, etc., etc. 12mo. Cloth, \$1.50. Philadelphia: Lindsay & Blakiston.

This is a valuable addition to the "Student's Guide Series" and is a pretty volume of 214 pages, printed with clear type in the usual excellent style of the publishers. Its value, however, does not consist in beautiful typography, for the most explicit directions for recognizing surgical affections by their symptoms are given with a conciseness and clearness that is truly remarkable.

The diagnosis of diseases of the mouth and teeth are, for a wonder, correct, which is more than we can say of medical works generally.

LONGLEY'S STUDENT'S POCKET MEDICAL LEXICON. A New Pocket Medical Lexicon or Dictionary, giving the correct Pronunciation, Definition and Meaning of all Words and Terms in General Use in Medicine and the Collateral Sciences. With the Pronunciation plainly represented in the American Phonetic Alphabet. By ELIAS LONGLEY, author of a "Pronouncing Vocabulary of Geographical and Personal Names," "An Eclectic Manual of Phonography," etc., etc. A small Pocket Volume. Price, in cloth, \$1.00; or neatly bound in Tucks, with Pocket, \$1.25. Philadelphia: Lindsay & Blakiston, 1879.

This is an entirely new Medical Dictionary containing some 300 compactly printed pages, and has the appearance of being very carefully prepared. It contains all medical terms in common use, with their pronunciation and definition, and is essentially new in its features, and fully brought up to the present state of medical science. As an adjunct to our desk we have already found its usefulness. It would seem to be just the book for dental and medical students.

EYESIGHT, AND HOW TO CARE FOR IT. 21 illustrations. By GEORGE C. HARLAN, M. D., of Philadelphia, Surgeon to the Wills (Eye) Hospital.

THE WINTER AND ITS DANGERS. By HAMILTON OSGOOD, M. D., of Boston, Editorial Staff Boston Medical and Surgical Journal. Philadelphia: Lindsay & Blakiston.

These books are fourth and fifth of the series of American Health Primers. They are charmingly written and the authors have managed to make them entertaining as well as useful. "Eyesight, and How to Care for It," is especially recommended to dentists, as the many practical suggestions for the care of the eyes cannot fail to be of service to them.

ATLAS OF HUMAN ANATOMY. To contain 180 large plates arranged according to Drs. OESTERREICHER and ERDL, from their original designs from nature, with full explanatory texts by J. A. JEANÇON, M. D. Cincinnati, Ohio: A. E. Wilde & Co., Publishers.

The prospectus of the above work says: "Our object in publishing this Atlas of Human Anatomy is to bring before the public a pictorial representation of all parts of the human body, in a size and form which ordinary works on Anatomy fail to furnish. The artistic skill bestowed upon the delineation of each figure, the clearness with which

each tissue, organ and part is defined, also the manner of arrangement of correlative structures will, in our Atlas, bring before the eye a very vivid image of the structural components of the body. Our aim is not to supplant, but to supplement anatomical textbooks. With this Atlas before him the learner will obtain a synoptical survey of all the parts of the human body, without having to enter at once into the bewildering details of descriptive Anatomy, but he will be gradually led into expansive knowledge of the science. To the physician our work will be a valuable book of reference. Any doubtful point he can clear up in a very short time by simply looking at one or more plates bearing on the subject, and by consulting our short, clear and concise text accompanying this Atlas. We will devote considerable space to the indication of the actions of single and groups of muscles in their individual and collective mechanical movements of the different parts of the skeleton. But few works on general Anatomy give this useful branch of knowledge the prominence it justly deserves. Even many works on Physiology but passing notice it, yet its importance every surgeon and physiologist readily appreciates.

On the dissecting table many deviations from the normal number, position and arrangement of vessels, nerves, etc., are met in the cadaver. We will endeavor to describe as many such anomalies as will prove useful to the knowledge of Human Anatomy, without exceeding the legitimate bounds of sufficiency.

Microscopic Anatomy, Histology and Embryology are at present comprised within the scope of medical instruction; they strictly form an integral part of Anatomy. We will, for that purpose, publish as many and as correct microscopic figures, bearing on these subjects, as will be necessary to thoroughly illustrate and explain them.

We hope that the low price of our work, and its intrinsic value, will form the best inducement to every medical man, medical student and lover of the useful knowledge of Anatomy to have it on his shelves or in his library."

The Atlas will be published in monthly parts, each part to contain four plates, 17 by 22 inches in size, besides explanatory text. The whole work to be completed in forty-five parts, at the price of seventy-five cents each. The paper, presswork and engravings are really superb.

BOOKS RECEIVED.

INDEX MEDICUS: A monthly classified record of the current medical and dental literature of the world. Compiled under the supervision of Dr. John S. Billings, Surgeon U. S. Army, and Dr. Robert Fletcher, M. R. C. S., Eng. Vol. 1, Nos. 6, 7, 8, 9 and 10. F. Leypoldt, publisher, 37 Park Row, N. Y.

THE PHYSICIAN'S VISITING LIST FOR 1880. Twenty-ninth year of its publication. Philadelphia: Lindsay & Blakiston.

CORRESPONDENZ BLATT für Zahnärzte. Berlin: C. Ash & Sons.

LE PROGRES DENTAIRE. Paris: C. Ash & Sons.

GIORNALE DI CORRISPONDENZA PEI DENTISTI. Redatto dal Dott. Alberto Couilliaux. Parma: Publicato da C. Ash e Figlio.

L'ODONTOLOGIA, Rivista mensile sui progressi della chirurgia e della protes dentale, di Luigi Ribolla, Medico-Chirurgo-Dentista; Palermo.

DENTAL OFFICE AND LABORATORY. Philadelphia: Johnson & Lund.

BUFFALO MEDICAL AND SURGICAL JOURNAL. Buffalo.

JOHNSTON'S DENTAL MISCELLANY. Johnston Bros., New York.

ANALES DE LA SOCIEDAD ODONTOLOGICA DE LA HABANA. Havana, Cuba.

THE DENTAL JAIKUS. Sacramento, Cal.

CANADA JOURNAL OF DENTAL SCIENCE. Montreal.

THE DENTAL ADVERTISER.

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NECROSIS.

BY H. H. TOWNSEND, PONTIAC, ILL.

On Saturday, September 7th, 1878, Mrs. R., about forty years of age, acting as a commercial traveler, came to consult me in regard to what she called an "ulcerated tooth." I was at once impressed with her feeble and emaciated look, which very much resembled a patient well advanced in consumption. The red blood corpuscles seemed sadly deficient. Pulse feeble and very frequent, something over 100. The history of the case, as nearly as I could get it, was, that some two months previous, she had had some teeth filled with Amalgam, and shortly afterwards began to notice a coppery taste in her mouth, smarting of the throat and fauces, soreness of all the teeth, and increased flow of saliva—the symptoms increasing in severity until profuse salivation ensued. This lasted some days, and after it subsided an abscess broke over the labial surface of the right superior cuspid root. Her dentist called it a case of "ulcerated tooth," and singularly enough, treated it through the fistula some six or seven weeks without removing the filling to ascertain the condition of the pulp. When I saw the case there were several fistulous openings discharging thick yellow pus. On examination with a probe I found the outer alveolar plate necrosed from near the first bicuspid nearly to the lateral incisor, and extending upward about one-fourth inch beyond the apex of the cuspid root.

Exfoliation had already taken place, and a few incisions through the gum with a lance, enabled me to remove the sequestrum with very little difficulty. The hemorrhage was slight, requiring no treatment. The wound was syringed with tepid water containing about four drops of creasote and

one grain of morphine to the ounce. As the inflammation had extended laterally to the first molar on the right side and to the first bicuspid on the left, and the patient being in such an anæmic condition, I was apprehensive that the necrosis would also extend and result in the loss of, perhaps, the entire jaw. I therefore painted the gums as far as inflamed, with tr. aconite root and tr. iodine, equal parts, with a view of allaying the inflammation and if possible preventing any further spread of the disease.

Prescribed a tonic of quinine and iron, as follows : Tr. muriate of iron, 1 oz.; sulphate of quinine, 1 dram ; water to make 4 oz.; teaspoonful in water three times a day. Also wine and egg before breakfast ; rare beef-steak, graham, and fruit ; recommended as a diet also milk and eggs. I removed the filling from the cuspid and found that the pulp had never been exposed, and was alive and probably in a healthy condition. I determined if possible to save this tooth, notwithstanding it had no bony covering on its labial surface. The cavity was filled temporarily with gutta-percha, and the patient dismissed at 12 M., with instructions to call again at 6 P. M. Came promptly on time. Syringed as before, and repeated the application of aconite and iodine. Saw the patient again Sunday morning. Had slept well and was much refreshed. Color improving. Pulse 80 and stronger. Inflammation of the gums subsiding. Discharge of pus considerably diminished. Treated as before, and repeated it again Sunday evening.

Monday morning found considerable improvement in every respect. Syringed with an alcoholic solution of salicylic acid in water. Applied the aconite and iodine as before, and repeated the treatment again at 4 P. M., as she was on her way to the train to leave town. The improvement was all that could possibly be expected in so short a time. Pulse strong and natural. Very little discharge of pus, and the inflammation of the gums very much reduced. As her business took her to Peoria, Ill., I sent her to my friend, Dr. J. M. Hunt, of that city, giving her a letter of introduction, containing a brief history of the case and my treatment. Some two weeks later I received a letter from Dr. Hunt, stating that he had continued the treatment except the application of the aconite and iodine, which he had discontinued a few days previous, as it was no longer needed. Reported the case doing finely. The deposit of new bone being quite perceptible. How long she remained there I do not now remember, but after leaving Peoria she syringed it herself, using the salicylic acid water for the purpose. Saw the patient again the next April, and found the reproduction of bone had been complete, except at a point just above the termination of the enamel on the labial surface of the cuspid, where the gum had receded, leaving a little notch in the gum. In December, 1879, I removed the gutta-percha filling from the cuspid and re-filled with gold. The pulp was alive and healthy, and the tooth as firm in its socket and as useful as any of its neighbors.

Now, as to the cause of the necrosis. My own opinion is, that the periostitis accompanying the salivation was the exciting cause, the debilitated condition of the patient tending to an unfavorable termination. What produced the salivation is not so clear. As it occurred soon after the introduction of some amalgam fillings, without the use of the rubber dam, and as the patient declared that she had taken no medicine whatever, I thought perhaps some particles of the filling had been swallowed, containing sufficient mercury to salivate. My theory of this however was somewhat shaken by learning of a case of salivation following the insertion of an amalgam filling in my own practice. On the 24th of August, 1878, I filled a mesial cavity in a right superior second molar, for a farmer in good health. The cavity was a simple one, not extending to the grinding surface. The first molar was missing, affording easy access to the cavity, which was prepared, filled and finished with the rubber dam on the tooth. The amalgam used was one of the gold and platinum alloys in the market, and was used as dry as it could be worked, and tin foil pressed upon the surface of the plug, to absorb any surplus mercury that might remain. The filling was burnished before the dam was removed, and I *know positively* that not one particle of the filling was swallowed. Yet, in a few weeks, the patient returned, complaining that he had been badly salivated soon after his tooth was filled. I examined the filling carefully, and found it in perfect condition. Also questioned the patient closely, and he insisted that he had taken no medicine of any kind. I have no theories to offer. Since writing the above, I have received a statement from Dr. Hunt of his treatment of the case of necrosis, its condition, progress, &c., which I append, as follows :

Mrs. M. H. R. came to my office in September, 1878, upon recommendation of Dr. H. H. Townsend, of Pontiac. Upon examination of the right superior lateral incisor, cuspid, and first bicuspid, I found the incisor and bicuspid slightly loose, but the cuspid was in a much worse condition, being affected by a lesion of the gum tissue on the mesial side, presenting an opening about half an inch deep, by about an eighth of an inch in diameter at the orifice, extending alongside the root toward the apex. The mucous membrane over the adjacent teeth presented a healthy hue, but over the cuspid, an appearance slightly purple, as though nature was timid in her expression of an effort she was being urged to make in a recovery of the gum tissue to a physiological condition. There was an appearance of partial recovery from necrosis, leaving a deep, well-defined sinus, with a constant, slightly appreciable deposit of granulations at its apex. The objects had been to prevent a union of the lips of the orifice, next to invite continued granulations of the deepest portion of the sinus, and lastly, to bring about a healthy color of the gum tissues. To this end I continued the solution of salicylic acid, as recommended by Dr. Townsend, as being

the best remedy, in my opinion, to invite granulations from the farthest point of the sinus, and preventing a closure of the orifice, and made a topical application with aconite and iodine ; directing the lady to continue Dr. T.'s constitutional treatment.

When the lady left me in six or eight weeks, the incisor and bicuspid were as firm as the other teeth, and the cuspid was much firmer than when I first saw her. I had the pleasure of seeing the case some months subsequently, and the granulations were making rapid progress toward a completion of the ultimate desire. The cuspid was firm, but not as firm as the other teeth, still very encouragingly so, much to my gratification, and thanks to Dr. T., and Mrs. R., who so kindly seconded my best feeble efforts towards the conclusion which I am now glad has been reached.

THE BISHOP-ELLIOTT CONTROVERSY.

Considerable interest has been excited in the controversy between Dr. J. Adams Bishop and Dr. W. St. George Elliott, in relation to the latter gentleman's paper read before the Dental Society of the State of New York, and published in the Society's Transactions, issued October, 1879. The paper is entitled "Gun-shot Wounds of the Mouth," and Dr. Elliott received the Whitney Memorial Prize of 1878 for the same. Dr. Bishop took exception to the article, and read a paper before the 1st District Dental Society, which was subsequently published in *Johnston's Miscellany*, Nov. 1879. A copy of this critique is printed below, together with Dr. Elliott's answer.

Mr. President and Gentlemen of the First District Society :

Since the last meeting of this Society I have received the published "Transactions of the New York State Dental Society, for the year 1878." In one of the original articles in the edition, I notice such misrepresentation of facts as is calculated to do great injustice, and mislead the student in search of truth. It is my duty to state the facts, for I was thoroughly familiar with the treatment and history of the cases to which allusion is made; I therefore ask the attention of the Society a few moments in review of the cases, and shall offer the same for publication in our dental journals.

I refer to what is entitled a prize essay written by W. St. George Elliott, on "Gun-shot Wounds of the Mouth," and I may add that very much the same paper appeared in the *New York Medical Journal* for March, 1879. The essay refers to the case of Carlton Burgan (operated upon in 1863), in which dentistry represented an interesting factor in the treatment, and conducted much to its great success. The injury could only be understood

as requiring the aid of dentistry to supplement surgery by a piece of dental mechanism, and the special interest in the case was in the requirement of a dental fixture as a *prerequisite* to enable the surgeon to accomplish the operation.

I refer you to the surgeon's report of the case. The late Dr. Gurdon Buck, in his "Reparative Surgery," published by the Appletons in 1876, says :

Page 36 : "In devising a plan for the repair of this extensive loss of parts, it was judged indispensable, as a prerequisite step to any surgical operation, that some artificial substitute should be adapted to the cavity of the mouth that would supply the place of the lost maxillary bone, and afford a solid support to the soft parts that would have to be transposed for the reconstruction of the mouth and the closure of the cheek and nostrils. Mr. Thos. B. Gunning, a skillful dentist of this city, to whom the case was submitted, generously undertook the execution of this delicate and difficult piece of work. The fixtures which he adapted were made of vulcanite."

Page 38 : "On trial the patient found he could wear them constantly with comfort, and could remove and replace them at pleasure."

"The requisite preparation now being completed, it was decided to perform the first operation on the 26th of March, 1863."

Page 40 : "Patient experiences no uneasiness from the presence of the artificial fixtures."

Page 51 : "In May, 1871, the author visited Burgan at his home in Baltimore. He still wore constantly the same palate plate that had been adapted in March, 1863."

In August, 1873, I was myself in Baltimore with Dr. Gunning ; we visited the patient and had the satisfaction of seeing the same plate in use and also found great improvement in the cicatricial lines, which had so softened that the patient experienced more benefit than could have been anticipated from the surgical treatment and mechanical appliances.

This was not a gun-shot wound, as Dr. Elliott remarks ; why it was brought into this prize essay, shorn of its principal interesting dental facts, unless to mislead, I cannot see.

The other case is that of the late Wm. H. Seward, whom this prize essayist saw at Yokohama six years after treatment ; and seven years after this (the patient being dead), he first ventures to put his observations in print ; and here it is published and sent out to you that the whole treatment of that case was a failure, and that the fracture of his jaw was quite ununited. Dr. Norman W. Kingsley followed, in what is called a discussion upon the essay on "Gun-shot Wounds of the Mouth," but which seems to be simply a *reiteration* of the Essayist's statement. He said, "There was no union of that broken jaw."

I had much to do with the case as an assistant, and saw the patient after union was effected. I must positively say that the statement is untruthful. The case was considered as a successful completion of all that could have been expected, and quite satisfactory to the patient, as numerous letters of the late Secretary and others, to Dr. Gunning, attest.

It is with great reluctance I break silence in this matter, and am only induced to do so by the gross misrepresentation of facts with which I am fully acquainted, and in regard to which silence would be a criminal neglect of duty.

The result of Dr. Gunning's treatment of Secretary Seward's lower jaw was, that the fracture on the left was united by a bony union, while the fracture on the right, which was so gravely complicated by the cuts inflicted by the assassin's knife, that the saliva from the parotid gland discharged through it constantly, was united by fibrous union, which was so strong in October, 1865, when I worked for the Secretary in applying an upper set of teeth, that the lower jaw was used in eating and speaking without difficulty.

I know that Dr. Gunning's report of this case in the *New York Medical Journal* for 1866 is strictly true.

DR. ELLIOTT'S REPLY.

Editors Johnston's Dental Miscellany:

MESSRS.:—Would you kindly allow me to correct some misstatements that appeared in a paper read by Dr. Bishop before the First District Dental Society, and which is published in your journal for November?

The essayist takes up and criticises a paper read by the undersigned before the New York State Dental Society, and by his misapprehension of facts he is led into unjust inferences.

As stated in the paper alluded to, I was consulted by the late Hon. W. H. Seward, in 1870, while at Yokohama, Japan. While rendering some dental service, I incidentally noticed that there was a false joint in the right side of the inferior maxilla. In speaking of the matter to Mr. Seward, he said there was no union of the bone at that side and that it was comparatively useless.

From what I now know of the case I infer he meant to say, that while the left side had united and was useful, the right had not, and consequently his lower jaw was *comparatively* useless.

When the paper was published, after having been re-written, in the *New York Medical Journal* for March, 1879, Dr. Gunning threatened the Messrs. Appletons with a suit for some \$20,000 damages unless I immediately retracted my statement, which I of course refused to do. During

last March I left New York and came to London to take charge of a practice, and I have heard nothing further until your journal came to hand.

Permit me to remark in closing that Dr. Bishop's statement in regard to the fracture is doubtless correct, as he merely verifies my statement, which was that the inferior maxilla was comparatively useless for masticating purposes, there being a false joint at the seat of the original fracture. No union having taken place, Dr. Bishop knows that fibrous union between the fractured ends of a bone produces a false joint, and that such a jaw must, in the very nature of things, be *comparatively* useless.

I regret, however, that I did not know of the fracture on the left side, or I certainly would have given due credit to Dr. Gunning, as I did in the case of Private Burgan, so unkindly alluded to by Dr. Gunning. I could have had no object in misrepresenting the matter, as I have not the honor of being personally acquainted with Dr. Gunning, and for Dr. Bishop I have always had the highest regard.

Very respectfully,

W. ST. GEORGE ELLIOTT, M. D., D. D. S.,

39 Upper Brook street, London, W.

In this answer Dr. Elliott says he gave due credit to Dr. Gunning in "Private Burgan's case." This statement may be questioned. After looking carefully over this "Prize Essay," we quote below all that relates to the Burgan and Seward cases. Dr. Gunning is only referred to in connection with treatment of fracture of the lower jaw, and in view of his appliances as shown in the *New York Medical Journal*, Heath's *Injuries and Diseases of the Jaws*, and the *Dental Journals* from 1863 to 1868 inclusive, Dr. Elliot's statement (quoted below) would seem unjustifiable. We leave our readers to form their own conclusions in respect to Secretary Seward's case.

Dr. Elliott in opening says: "I purpose taking up, in this paper, only the gun-shot injuries of the mouth, but it will be necessary, that you may more freely comprehend the matter, that I include, to some extent at least, the contiguous parts; but, at the same time, I do not propose taking into consideration, any cases that do not involve either the buccal or nasal cavities." * * * *

Referring to plastic operations on the face, Dr. Elliott says:

"Of the thirty-two plastic operations performed on the face, there might be said to have been a fair proportion of successful results—markedly the case of Private Carlton Burgan, of the Maryland Legion, who was operated on some five times, and which is reported in full by the operator, Dr. Gurdon Buck, in the 'Transactions of the New York State Medical Society, for 1864,' page 173; although this case does not

"strictly come under the heading of this paper, his injuries not being the result of gun-shot wounds, but of a sloughing ulcer induced by an over-dose of mercury on an enfeebled constitution." * * * *

The last half of the paper is devoted to fractures of the inferior maxillary and the appliances used in treating them; from near the end we quote as follows:

"Dr. Gunning has made several appliances, but I cannot see that they offer anything of value. Some years ago I was called upon to attend the late Wm. H. Seward, while abroad, and I discovered that the fracture of his jaw was quite ununited, there being a false joint, giving the late Secretary much inconvenience. I speak of this case from the fact that the peculiar character of the accident, together with the means by which the injury was treated, were all well known to the profession; but the results may never before have been published." * * * *

Only one member appears to have discussed the paper. We quote from him as follows: "N. W. KINGSLEY, New York—There is hardly any one present who has forgotten the flourish of trumpets that attended the treatment of the case of the late Secretary Seward, and how the treatment and results were reported at the time, and for months and years afterwards. Here we have the statement of a gentleman who had large experience in the treatment of similar cases, who saw that gentleman years after, and had the best inside opportunity of determining the matter, who asserts that the whole treatment was a failure. There was no union of that broken jaw."

PLASTIC FILLINGS.

BY HENRY S. CHASE, D.D.S., M.D., ST. LOUIS.

It is now about four years since I commenced the use of plastic fillings to any considerable extent.

In 1875 I placed in the teeth about nine hundred fillings of Fletcher's Gold and Platina Alloy. In the year 1876, 1877, 1878, and 1879, I have placed in the teeth about four thousand fillings of Stanous Gold, and five hundred fillings of Plastic Tin. In 1878 I placed about fifty fillings of Agate, and Acme Cements. In 1878 and 1879 I have placed about two hundred fillings of Fletcher's Porcelain.

I have very few transient patients, ninety-five per cent. of these fillings were placed in the teeth of my regular families. I am in the habit of seeing my patients once in six months or twelve months. Very few defer their visits, for examination, longer than this. The Plastic fillings then have been brought under my inspection many times. I am satisfied that

the teeth in which these fillings have been inserted are in a much better condition than they would have been had their cavities been filled with gold by the best of operators.

Fletcher's Porcelain has been used mostly for cavities whose fillings would be exposed to sight. I am delighted with the results. It is said that the "Porcelain" is an oxy-phosphate of zinc. "Weston's Cement," "Poulson's Cement," and "Flagg's Enamel" are all said to be "oxy-phosphates of zinc." I have had no extended experience with any of these cements excepting Fletcher's Porcelain. I have lately experimented a little with "Flagg's Enamel." This sets very quickly; I think in one-third the time that the "Porcelain" does, and becomes hard enough for mastication in ten minutes. "Flagg's Enamel" annoyed me by its quick setting until I learned by accident how to prevent it.

This can be done by keeping the cement very cold and placed in the tooth. Heat hastens the hardening and cold delays it. The same effect is also produced on the "setting" of Amalgams. I cool a porcelain slab, or small plate, with cold water before mixing my cement upon it. Dr. Flagg claims that the "quick setters" are the best cements, and will last in the mouth much longer than the "slow setters." But a quick setting cement which is delayed in its action by cold is not at all impaired in its value as a filling. I find that all these cements adhere closely to the dentine, if the cavity is very dry when filled. I find, also, that not the least decay takes place *under* the cements. Four years ago I built up whole palatal walls for the right upper central incisor, with "Fletcher's Enamel." There was absolutely nothing left of the crown of this tooth but the labial wall, a thin slab of enamel and dentine. Two weeks ago I rebuilt the palatal wall, and I hope it may stand four years longer, although the first time I placed the labial wall I predicted an existence of the tooth of only one year. I tell my patients that they must expect to have the *surfaces* of these cement fillings renewed once in two years; but in very rare cases will the filling have to be wholly removed. If a gold or other metallic filling fails, it is generally owing to decay under the plug. When the cavity is refilled, the decay must be removed. After three or four refillings the tooth is about "used up." Cement fillings have this great advantage: they preserve the dentine of the tooth perfectly, and if the filling has to be renewed the tooth does not suffer by it. To insert a gold plug properly often necessitates the cutting away of sound dentine. Plastic fillings rarely demand this. I often am enabled to color the cement, which I use in an exposed cavity, so that it matches the shade of the enamel. My patients much prefer a filling which will not be conspicuous like gold. They also like the short operations, and the easy operations, which plastic fillings insure. They do not in the least object to a "bill" less in amount than formerly.

Amalgams are used by most all the dentists in the United States ; but few operators, comparatively, are using the "oxy-phosphates." But they are being experimented with by a large number of sensible and honest men, who will, after a sufficient experience, tell us what they think of them. As for myself, I have abandoned gold as a filling, and could not be induced to "go back to the old way."

My experience with amalgam leads me to think that too much quick-silver is generally used in amalgamation. If one will place in the palm of the hand the mercury and the alloy, together with a teaspoonful of alcohol, and manipulate all together, it will be found that considerable oxide of tin will stain the alcohol. This should be washed away two or three times, and it will be found that thereby less mercury will make a plastic than without the washing. I think it better for the operator to get accustomed to one or two good alloys instead of continually trying new ones. He should test that which he uses in glass tubes and red ink occasionally, to be sure that a filling of it will not contract after hardening, so as to allow of leakage.

The oxy-phosphates are all better for being kept dry some time after insertion. As soon as I insert one of these fillings and remove the surplus, I varnish the plug with a varnish composed of sulphuric ether and copal gum. These two things can be obtained at any country drug store. The copal will very readily dissolve in the ether, and an ounce of it will cost no more than ten cents. The air syringe will dry the varnished plug instantly. The varnish should be allowed to remain until worn off ; this will keep the cement dry for three or four hours, probably.—*Missouri Dental Journal*.

AMOUNT OF DENTISTRY DONE IN THE UNITED STATES.

BY J. N. FARRAR, M.D., D.D.S., BROOKLYN, AND NEW YORK.

That people are becoming aroused upon the subject of decayed teeth can be seen from the employment of twelve thousand dentists in our country (United States), who, according to the best authority we have, are annually packing into cavities of the teeth no less than about half a ton of pure gold, costing about half a million dollars. It is estimated that there is at present (1879) in the United States about one hundred and fifty millions of dollars in (gold) coin. Now at the rate which gold is being consumed in filling teeth, it will only require three hundred years to bury the present amount of gold in this country into graveyards. Besides this, there probably is in weight four times as much cheaper material, such as

silver, platina, &c., used for filling cavities in teeth, which may safely be estimated at not less than one hundred thousand dollars, all of which in itself would amount to quite a large sum in the course of ten or twelve years (\$1,000,000 to \$2,000,000).

In the United States there are annually made about three million artificial or porcelain teeth, mounted on various kinds of plates, gold, platina, rubber, &c., which help to keep the busy fingers of the dental profession at work. What is more wonderful, however, is that not half of the people *who need it*, avail themselves of their services.

From statistics taken in America, it has been ascertained that out of an average of about eight people of all classes as we find them, only one can be found with perfect dental organs. All the rest are troubled more or less with decayed teeth. What an army of bandaged faces there must be pacing the floor in writhing torment every night, and yet some dentists wonder why the Coltons flourish while they do not, a query which it seems evident enough to me can be easily solved, and a change which is certain to be made when the profession shall take proper and liberal steps for a more general enlightenment of the masses of the people, upon the subject of the importance of natural teeth.—*Dental Office and Laboratory.*

OBITUARY.

SAMUEL STOCKTON WHITE, D. D. S.

DIED, at Paris, France, December 30, 1879, of congestion of the brain, Dr. SAMUEL S. WHITE, in the fifty-eighth year of his age.

This intelligence of the sudden and unexpected termination of the career of one who seemed but a few days ago to be in the fullness of his strength, will be received with a sorrow equal to the sad surprise. Although he had so long since attained the leading position which he occupied, we naturally looked forward to many more years of usefulness for him in the work he loved so well, and in the duties which he discharged so faithfully. A life adorned by personal virtue, consecrated to worthy aims,—a life of usefulness to the world, and especially to the profession of dentistry,—is thus untimely ended.

About the middle of November he had a slight congestion of the brain, from which he recovered quickly, but which was accepted by his physicians as an indication that he must at once seek a long-needed rest. In company with his son and daughter, and attended by his nephew, a physician, he sailed for Europe on November 19. He seemed to be rapidly gaining health and strength, until a little before Christmas a second attack of congestion occurred, to which he succumbed on the 30th of December. His remains were forwarded to his home, and, attended by

his sorrowing family and friends, were consigned to the bosom of our common mother earth on the nineteenth day of January.

Samuel S. White was born at Hulmeville, Bucks County, Pennsylvania, June 19, 1822. He was the eldest child of William R. and Mary (Stockton) White. His father died when he was eight years old. Soon afterwards his mother with her children removed to Burlington, New Jersey, where he resided until, at the age of fourteen, he was indentured to his uncle, Samuel W. Stockton, of Philadelphia, whose manufacture of mineral teeth was the first in the United States to attain any commercial importance, to learn "the art and mystery of dentistry and the manufacture of incorruptible teeth."

On attaining his majority he commenced the practice of dentistry in his uncle's office, and at the same time superintended his manufacturing department. In the following year (1844) he began the manufacture of teeth on his own account, in the garret of a dwelling-house at Seventh and Race streets, uniting with it the practice of dentistry in an office in the same building. This was the initiatory step in an enterprise which has since grown to be the largest of its kind in the world. In a short time he removed to Race street above Eighth, continuing both branches of his business. In 1845 he took in as partners Asahel Jones, of New York, and John R. McCurdy, of Philadelphia; in 1846 he relinquished the practice of dentistry in order that he might devote his entire time to the manufacture of porcelain teeth. The firm remained on Race street till 1849, when it removed to a property on Arch street below Sixth, which had been purchased and fitted up to accommodate the increasing business. In 1852 another removal to a still more commodious structure two doors below was necessitated. Branch houses were established, in New York in 1846; in Boston in 1850; in Chicago in 1858. Mr. McCurdy withdrew in 1859, and in 1861 Mr. Jones also retired, Dr. White purchasing the interests of both. In October, 1868, the imposing structure at the southeast corner of Chestnut and Twelfth streets, which had been erected by Dr. White, and fitted up expressly for the purpose, was occupied as a manufactory and depot.

Dentistry as a fine art may be said to date its beginning from Dr. White's entrance into business. The profession was in its infancy. The porcelain teeth which up to that time had been placed upon the market were in all respects but wretched imitations of the natural organs. To his persistent sagacious efforts to produce better results were due the wonderful advances attained in the teeth of his manufacture even thirty years ago.

It will scarcely be disputed by any one familiar with the history of dentistry for the past forty years that in many directions no one man has

exercised a wider or greater or more lasting influence upon its development, not alone in this country, but throughout the world, than Samuel S. White.

He took an active interest in all that concerned the dental profession ; identified himself with it and gave to its advancement the best efforts of his life. Though already overburdened with business cares, he accepted the leadership of an opposition to exactions by the Goodyear Dental Vulcanite Company, which he conscientiously believed were founded on an indefensible patent. His services and sacrifices in the position which was thus almost thrust upon him should be long and gratefully remembered by the profession in whose interest he acted, as, whether right or wrong, successful or otherwise, he was honest and earnest in his efforts in the legal contest of their claims, involving himself in personal suits for slander and "maintenance" with damages laid at \$175,000.—*Extract from Editorial in Dental Cosmos.*

A LETTER OF INDIVIDUAL IMPORTANCE TO EVERY ONE INTERESTED IN DENTISTRY.

DEAR DOCTOR:—I am preparing for publication "A Directory, History and Biography of Dentistry of the World," and am exceedingly anxious that your name and address should correctly appear in its pages. I have at this time gathered about 10,000 names, but fearing that there may be an error in your name or address, or that it may be omitted altogether, I *earnestly request* that you send me your printed or plainly written professional card, containing your full address, with degrees, titles, and honors.

You will please answer the following questions : What is your native tongue and with what languages are you conversant ? Please state briefly : What colleges or institutions have you attended ? Of what societies, if any, are you a member ? What office, if any, have you held in either ?

This work will contain a general history of dentistry and its individual history in each country, written by authors who are acknowledged authorities. It will also contain the biography of those of the profession who have been its greatest benefactors. There will be much other matter introduced which will make it a work of great value to the profession. It will be especially useful in having the address of all the dentists in the world. To this end I would request every dental college to send me its name, address, date of organization, number of teachers, with their duties, and all other matters of interest to the dental profession.

All dental societies and other organizations pertaining to dentistry, will please send their names, location, time of meeting, number of members,

when organized, and all other important information, with the printed copy of the laws of their State and Country governing the practice of dentistry.

I ask the co-operation of all dental journals, colleges, societies, dealers and individuals interested in dentistry in all parts of the world, and any information not asked for in the above, which you may think of interest, will be thankfully received.

All dental manufacturers and dealers in the world will please send me their business cards immediately.

It will be evident to all that to complete a work like the one proposed, will require considerable time and money, both of which have already been largely expended.

I have secured copyrights for the book, and it will be sold by subscription. All subscribers who send in their money before November 1st, 1880, will have their names in **heavy letters**, which names will generally be selected as liberal persons, therefore to such will most likely be sent circulars, papers, books, etc., setting forth all that is new and useful to the dental profession. In order to secure your name in the Directory, you will please send the desired information *without delay*, and state whether you would like to subscribe.

The price of the book will be five dollars. Remember that you are not required to purchase it in order to have your name inserted.

All dental journals in the world will please copy this article for the good of the profession at large, and send me a copy. We will then give your journal ample notice in the Directory. Hoping that this will receive your favorable attention, I am,

Very respectfully,

B. M. WILKERSON, M. D., D. D. S.,

Junior Editor and Proprietor of "The Independent Practitioner,"

68 N. Charles Street, Baltimore, M. D.,

United States of America.

WE DESIRE TO CALL ATTENTION to the special Heating Apparatus, designed by Mr. Thomas Fletcher and advertised on another page of this Journal. The Nos. 45 and 46 "solid flame" burners are certainly the best heaters that we have ever used; they are especially useful in a dental laboratory for every purpose except heating vulcanizers. Being strong and well put together, it would seem to be an impossibility for them to get out of order as do the cheap and fragile "gas stoves" that are on the market.

An exceedingly useful burner is the "New Evaporating Burner." We are positive that there is no other burner made that will distribute so small a quantity of gas over so large a space. This burner is especially recom-

mended to dentists for the manufacture of Nitrous Oxide Gas, as it is a perfectly safe one for heating flasks. A glance at the burner carries with it a conviction of its adaptability for heating fragile vessels.

These burners—as are all of Mr. Fletcher's Laboratory Apparatus—are manufactured in this country exclusively by the Buffalo Dental Mfg. Co. They have lately issued a new and complete price list and catalogue of Apparatus, that will be sent post-paid to any applicant.

THE EIGHTH DISTRICT DENTAL SOCIETY of the State of New York will hold its twelfth annual meeting in the City of Buffalo, April 27, 28 and 29, 1880.

The Society will convene at 2 o'clock P. M., on Tuesday, and continue in session until Thursday noon.

The Eighth District is one of the largest Societies in the State, its meetings being well attended, and of a most interesting character.

A larger number of essays than usual have been prepared and an unusually good time is expected.

Dentists outside the District, especially from Canada and the adjoining States, are always welcome. Any information in regard to the Society will be most cheerfully given by addressing the Secretary,

CHAS. S. BUTLER,
263 Main St., Buffalo, N. Y.

MISCELLANEOUS NOTES.

A man went out and hanged himself the other day because a dentist told him his tooth was affected with "nodular calcification of the pulp." He left a note to his wife, saying he didn't want to live on and give it to her and the children.

A young dentist was introduced to a fashionable beauty the other evening, and gracefully opened the conversation by saying: "Miss, I hope I may consider that we are not entirely unacquainted. I had the pleasure of pulling a tooth for your father a short time ago."

In a lecture on the utility of Electricity, Dr. Werner Siemens, of Berlin, recently prophesied that the energy of the solar rays, manifested in currents of air or in falls of water, may by-and-by, through the electric current, furnish all necessary heat, and render us independent of ordinary fuel.

Red and Blue Light from Gold.—Professor Roscoe lately exhibited the different preparations of gold in minute division made by Faraday himself, some of which transmitted blue light, and others red; showing that, at all events, two cases of molecular condition exist in the case of metallic gold.

The Largest Piece of Carbon in the World.—Mr. Streeter, the author of "Precious Stones and Gems," "Gold," "Pearls," &c., &c., has now in his possession an extraordinary piece of carbon, consigned from Brazil, which is understood to be the largest ever found in the world, the weight being nearly 800 carats. It will probably tend greatly towards convincing the public of the futility of man's endeavors to rival nature in the production of diamonds. The specimen will probably be purchased for some scientific institution.

Dentistry in New Zealand.—A lady recently returned from New Zealand states that she had to travel over fifty miles to the nearest dentist. When she reached his house he was too intoxicated to attend to his business, and she remained in the place a week before the dental operation could be performed. That would be a good country for some of our surplus dentists "of good moral habits" to emigrate to.

One of the London correspondents has discovered that "Darwin's theory is proved at last." According to this gentleman, "Prof. Taylor, the naturalist, of Chicago," has taken the "lithedon graniticus, which digests the hardest granite, and given it iron to eat." He had some trouble at first, but we are assured that there is now a whole tribe in Chicago living on iron. The London correspondent (he appears in many places) must have a very strong digestion himself.

The Skulls of Women.—M. Lebon, in a communication made to the Congrès d'Anthropologie in Paris, pointed out that, while the relative volume of the skull, compared with the rest of the skeleton, has increased with the progress of civilization, the difference in size between the skulls of men and women is also much less in the savage than among the civilized races. This difference was admitted by the ethnologists present, and was explained by the president, M. Broca, on the ground that among the primitive races women led much the same lives as men, and took an equal part in the struggle for existence. According to these anthropological data, the "protection" of women and their exclusion from professional struggles have ended in lessening the cranial capacity, therefore presumably the brain power.—*Medical and Surgical Reporter.*

The Circulation of the Blood Made Visible.—Dr. C. Hüter, a German *savant*, of Greifswald, has devised a simple arrangement which demonstrates the circulation of the blood in the human body by making it visible. Dr. Hüter's method is as follows: The patient's head being fixed in a frame, on which is a contrivance for supporting a microscope and a lamp, his lower lip is drawn out and fixed on the stage of the microscope by means of clips, the inner surface being uppermost, and having a strong light thrown upon it by a condenser. When these preparations are completed, all the observer has to do is to bring the microscope to bear on the surface of the lip, using a low power objective, and focusing a small superficial vessel. At once he sees the endless procession of the blood corpuscles through the minute capillaries, the colorless ones appearing like white specks dotting the red stream. Dr. Hüter asserts that by taking careful note of variations in the bloodflow and changes in the corpuscles he has derived great advantage in the treatment of medical cases. This is the first instance of the flow of the vital fluid in one person being watched by another.

Mr. Thomas Fletcher, the well-known maker of scientific apparatus, of Museum street, Warrington, must be a man of considerable public spirit, as well as enterprise. From a circular letter he has sent us we learn that a few friends interested in scientific matters, have decided to meet every Thursday evening for the winter months, at his house, with the object of discussing new or interesting scientific matters. The meetings will be informal, simply a social gathering of those interested in the progress of science. If the movement is appreciated by a larger number than can conveniently be accommodated, the question of forming a scientific club will afterwards be raised. The laboratory will, for the evening, be converted into a smoke room, and any apparatus will be at the service of all. Both these privileges will, we are sure, be largely appreciated. These meetings, Mr. Fletcher is careful to state, will be so arranged as to be little or no cost to himself, and therefore they will, so far as room permits, be open to all interested in matters likely to be brought forward, all being at perfect liberty to come and bring any friends. We heartily wish success to Mr. Fletcher's efforts to foster a love of science in Warrington.—*Nature.*

THE DENTAL ADVERTISER.

VOL. XI.—BUFFALO, N. Y., JULY, 1880.—No. 3.

HYDROBROMIC ETHER.

DR. LAWRENCE TURNBULL, of Philadelphia, recently delivered a lecture on "Pain and Anæsthetics," before the class of the Pennsylvania College of Dental Surgery, in which he says that for the dentist, in extraction of teeth, the safest anæsthetic is *nitrous oxide gas*, pure and freshly made, which, with but little effort, produces complete insensibility to pain, and is most rapidly eliminated from the system. In Philadelphia, in the eighty thousand operations, no death has ever resulted from it, and even where cases of death have been stated to have been caused by it, in other cities, proof has been wanting in some important matter, and our investigations with the various tests, on ourselves and others, and with the ophthalmoscope, microscope and spectroscope, has fully proven that in the ordinary doses in which it is employed it is absolutely safe, that is, as far as the word can be applied to an anæsthetic. For all operations in surgery, both for the general surgeon and dentist, at the house of the patient or in the private office, nothing has yielded such satisfactory results as *hydrobromic ether*. This, said the Doctor, was my own opinion, expressed in my work when I wrote my conclusions, in June, 1879, and this opinion has been confirmed by its still more extended use in one hundred and sixty cases, in all kinds of operations. These facts have been proven, not only by myself but by surgeons in New York, Philadelphia, and in the West. Its odor is so agreeable, and it produces on the throat and upper parts of the pharynx such an anæsthetic effect, that operations can be performed upon these parts with ease and safety. It will not easily ignite.

Method of using it.—The hydrobromic ether is best given in a folded starched napkin, so as to cover the face, and inside that a soft pocket

handkerchief or second napkin. Twice he has found that unless the first drachm was crowded upon the patient it is apt not to act promptly. This has been a cause of failure in two or three instances, in the hands of able surgeons.

He has met with one or two specimens of hydrobromic ether which, on standing, would become brown, from free bromine, and also some of the specimens had a most disagreeable odor of bromoform, and others of free phosphorus. Another specimen was mixed with ordinary ether, and would explode and burn. One of the greatest advances in its use by the profession was the obtaining of a formula free from the explosive article, phosphorus, and furnished at a moderate cost; the full formula will be found in his work, the "Advantages and Accidents of Artificial Anæsthesia," 2d ed., 1879. Dr. Turnbull also states that Messrs. Wyeth & Bro., of Philadelphia, are now able to supply it in any quantity, at a very moderate cost. Their product is entirely free from any odor, an objection to much of this anæsthetic as prepared by other chemists.

Hydrobromic ether possesses the following properties:

1. It is an anæsthetic which, with care, may be safely administered to man and animals.
2. It is more rapid in producing anæsthesia than even chloroform, and is eliminated, by respiration and the kidneys, more rapidly than any other of this class of agents.
3. The heart and respiration are but very slightly affected, unless employed in excessive quantities.
4. Vomiting is more rare than with ether or chloroform.
5. Owing to its odor being more rapidly removed, it can be used with comfort in a private office or the patient's chamber; and as a rule, the odor is more agreeable than that of ordinary ether.
6. Hydrobromic ether not being inflammable, and producing its anæsthetic influence on the muscles of the throat, any operation can be performed on the mouth and throat with satisfaction to the surgeon and comfort to the patient.
7. In vivisections it acts more promptly than ether upon animals, requiring, as a rule, only two minutes to bring a dog under its influence, and is not fatal like chloroform.

WASHING AMALGAMS.

I have so frequently been told by operators of their great success with washed amalgams as compared with unwashed, that I have been at some pains and trouble to discover the reason of what may be granted as a fact. Knowing with certainty that the process of washing was a serious evil, the

fact of practice being directly contrary to theory, puzzled me not a little until I watched a good operator at work washing an amalgam, when the explanation of the anomaly was simple enough. It would appear that all who have compared washed and unwashed amalgams have treated both in the same way, *i. e.*, by mixing with excess of mercury and squeezing out. Knowing that without exception all plastic fillings are liable to total failure unless they set rapidly and thus preventing alteration of form by moisture, and knowing also that amalgams mixed with excess of mercury are exceedingly slow in setting, the advantage of washing was explained in the simplest manner by the longer time required to manipulate the mass, which resulted in the filling being harder than when finished than if no time had been lost by the washing process.

As the mixing with excess of mercury had been utterly condemned both by theory and practice, this apparent advantage in favor of washing is at last proved to be a false one.

Any amalgam to be absolutely reliable must be worked in such a manner that it is hard enough for mastication as soon as finished, or at least in a few minutes after. Granting this as a necessity for good work, the process by which it is obtained and which requires the smallest quantity of mercury is the best.

THOS. FLETCHER.

NO "BATTERY" IN A TOOTH.

BY CHAS. MAYR, A. M., SPRINGFIELD, MASS.

A new opinion advanced with the emphasis with which Dr. H. S. Chase defends the hypothesis of galvanism in teeth filled with gold, cannot fail to attract general attention. In a club of dentists of this city my attention as a specialist in practical chemistry and electricity was drawn to this subject and chiefly to article IV in the "Independent Practitioner" of February, 1880, pages 77-81.

When I had read the article, I felt my whole chemistry and electricity crumble to pieces, if the facts at the bottom of page 79 were true; they were so startling, that I at once began careful investigations, and the results were so completely in accordance with the well known facts of chemistry and so absolutely against Dr. H. S. Chase's "facts," that in the interest of truth and science I thought it necessary to give my results here.

I first have to correct some erroneous statements of Dr. Chase, so discordant with the "text books on electricity," that "every dentist who has studied the elements of electrical science" must admit their untenability.

Dr. Chase always uses the term "battery" instead of element or combination; a battery is a combination of *several* cells, each cell containing

an electric combination, or of elements ; a tooth never can be a battery, it can only be a cell or a combination, as long as it does not contain several distinct cavities all properly prepared and connected.

Then he says : "A galvanic battery may be composed of almost any two different substances." The little word "almost" is very important. Why not of any? If Dr. Chase goes further in his "text books" he will find that *both* substances must be conductors of electricity. Thus we have electrical combinations not only of two metals, but also of two liquids, even of metals and salts, but always both substances must be conductors ; e. g. glass at common temperature is a non-conductor of electricity, at least not a worse conductor than dry dentine or "dentos," and no "battery" can be made in which glass is one element, even if the liquid be hydrofluoric acid which attacks glass most violently ; yet if we melt glass, it becomes a conductor of electricity and—as Faraday observed—capable of forming an electric combination. Dr. Chase himself is aware of this fact ; at the end of the article he says, "gutta-percha fillings being non-conductors, form no battery (!) with dentos." Is "dentos" a conductor of electricity? Most certainly not ! Dentos being a mixture of carbonate and phosphate of lime with organic substance is when dry as complete an insulator as ivory ; by becoming moist, not the insulating substance becomes a conductor, but the liquid filling the pores conducts the current ; the porous cells of Grove's battery are dry insulators as well as moist, yet they let pass the electricity through their pores when these are filled with moisture, acid, etc., without becoming electrical elements themselves. On page 78, Dr. Chase uses the term "strong." What is strong, the electromotive force, (Volts) or the intensity of the current? (Webers.) As Dr. Chase uses the "battery," wrong, he should state exactly what he means by strong in an exactly scientific sense.

To enter into all his little inaccuracies and logical sommersaults, would be an unnecessary loss of time and not help our object. He gives the coefficients of conductive power :

Gold, 60.	While they are :	Gold, 60.
Tin, 30.		Tin, 15.
Amalgam, 10.		Amalgam, (?)

Did Dr. Chase determine the conductive power of Amalgam, for no text book gives any value of it, and it cannot be supposed that he puts figures at random in a scientific essay?

Gold and "dentos" a battery ! if this combination gives electricity then gold and glass, gold and gutta-percha, nay, any combination will give a current, if the liquid is so chosen, that it attacks one of the two substances ; Dr. Chase would really have solved the all-vexing question to obtain cheap electricity, e. g. copper, muriatic acid and marble would fill

all requirements, and yet such batteries are not used ! How does Dr. Chase come to the figures of "strength of batteries" on page 79 ? They are so fantastical that they are above criticism.

But the worst comes now, and gives me the chief cause to enter into polemics with a well known dentist. Dr. Chase speaks of his prepared cubes, and how they were filled with gold, amalgam, etc.; and exposed to the action of vinegar, and then he gives the loss in each case after one week's immersion.

Who, Doctor, made these experiments ? There are only three suppositions as to how such results could have been obtained : that the experiments never were actually made ; that they were as chemists say, monstrously "doctored ;" that the experimenter was very unskilled and inexperienced in such kind of work, and that his apparatus was insufficient. In face of the well known character of Dr. Chase, the first two suppositions have to be abandoned.

Scientific experiments must be reported, so that every one can repeat them who has proper instruments and skill. Now, there is a great deficiency in Dr. Chase's statements. What is the exact strength of your acid ? What is the absolute weight of your cubes ? It is necessary to give it, since you give the absolute loss. What was the amount of liquid used ? Are you sure that your cubes were made from teeth comporting themselves dentically to the acid ? Did you dry your cubes equally before and after the immersion in the acid ? Did you never use a cube twice ? It is necessary to ask these questions, since a careful investigation of the subject has shown me, how important it is to observe every possible precaution in experiments of this kind ; perhaps in answering questions, Dr. Chase himself will find the source of the incredible and faulty results which he obtained.

As far as the scanty report of Dr. Chase enabled me to repeat his experiments, I have done this with all the precaution which many years study and practice have taught me, and have come to the following results :

1. Experiments with plugged cubes are absolutely incomparable with each other, if not verified and compared with the results obtained with an unfilled cube of the very same tooth.

2. Different teeth and cubes made thereof lose very differently in the same acid, in the same time, without any visible difference in their structure ; e. g. 6 teeth lost in 500 ccm of acetic acid (vinegar) of 2.1 p. c. strength respectively 13.5, 17.5, 25.3, 12.8, 18.9, 14.4, p. c., the loss included almost no organic substance, but only the inorganic salts, so that a tooth or cube of a tooth never can be used twice.

3. That the drying before and after immersion has to be done very carefully in a water bath, the balance should give milligrams, ($\frac{1}{100}$ grains.)

As I think that a full report of my experiments is not of sufficient in-

terest to all the readers of the "Independent Practitioner," I only give the results ; the exact report of the experiments is to every one's disposition if required.

I accompanied every root plugged by a reliable dentist of this city respectively with gold, amalgam, gutta-percha, oxychloride, with an other root of the same tooth, so as to see plainly what the filled root would have lost if not filled ; both roots were of nearly the same weight. I brought both roots to equal surfaces exposed to the acid by filling the cavity of the test root with some wax which by previous experiments I had found to be absolutely without influence on the solubility of the tooth ; all the four plugged roots together with the four test roots were put into the same vessel, covered with 500 ccm acid of the above strength and left entirely undisturbed for one week ; the average weight of an unplugged root was about 300 milligrams and the average absolute loss about 18 p. c. Supposing Dr. Chase's cubes of about 300 milligrams, (the absolute figure matters little here, since the relative loss in comparison with a wax-filled root is the chief point,) his cubes lost :

Gold filled cube,	. . . . .	20 p. c.
Amalgam "	. . . . .	13 p. c.
Gutta-percha "	. . . . .	3 p. c.
Wax filled "	. . . . .	3 p. c.
Oxychloride "	. . . . .	- p. c.

Taking the wax-filled cube as the point of comparison, we find the following excesses of loss above the otherwise filled cubes, as obtained by Dr. Chase compared with my experiments.

Dr. Chase's experiments :

Gold filled cube +	17 p. c.
Amalgam " +	10 p. c.
Gutta-percha " -	p. c.
Oxychloride " -	3 p. c.

My experiments :

-	0.9 p. c.
+	1.9 p. c.
+	1.3 p. c.
-	1.9 p. c.

Every one who understands how to read from experimental figures sees that in my experiments there appears nothing like a law ; the figures show, that the filling, except with oxychloride has no effect on the solubility of "dentos," the differences are merely accidental, due to structural difference, only in the case of the root plugged with oxychloride I could find a connection between the smaller loss, though even in this case the total difference was but 1.9 per cent ; the oxychloride neutralizing the acid in the immediate neighborhood of the tooth, hereby indirectly protected the tooth ; I even could collect about 12 mgr. of acetate of zinc, crystallized near the tooth. Dr. Chase has a most remarkable natural curiosity, more astonishing and valuable to chemists than the great diamond, a tooth which after being simply plugged with oxychloride lost nothing by one week's

immersion in his acid in which a gold plugged tooth lost 6 cgr. !! The root thus plugged in my experiments lost fully 12.5 per cent. absolute weight ! Here, doctor, is an enormous experimental discrepancy. Though Dr. Chase doubtless has done great service to dental science by directing the attention of truth seeking dentists to this very important subject, yet his hypothesis based on wrong notions of electricity and on absolutely erroneous "facts" and faulty experiments has to be abandoned.

I shall not attempt to show the weakness of the "battery" theory by the numerous dental facts that can be brought against it, I only wish to draw attention to a single one. If the theory of "batteries" in teeth was right, the simple conclusion would be that in *all* cases a gold filling would lead to a rapid decay of the so filled tooth, yet dentists assure me that thousands of people who have their decaying teeth plugged with gold never suffer from consequent decay, and that even after having for 30-50 years, a "battery" in a tooth, this tooth is sound around the gold filling as on other places. Is this true, doctor, and how does it agree with your theory?

It is an undeniable fact, that often a gold filling does not arrest secondary decay when other fillings do, yet I think, that physiology, chemistry and mechanical forces are fully sufficient to explain this fact without having recourse to chimerical batteries. That under special circumstances galvanism may be generated in the mouth by f. i. different metallic fillings, contact of different metals, thermoelectricity, etc., is very well possible, yet the chemical action arising from such conditions will be so infinitely small—though the effect on a nerve might be quite considerable—that it would be of no account compared with the large amount of chemical action brought about by the different liquids in the mouth, tooth and pulp.—*The Independent Practitioner.*

PAINLESS DENTISTRY.

SOMETHING OF INTEREST TO DENTISTS AND CAPITALISTS.

We presume every dentist in the country has received a small pamphlet from the Dennett Dental Näboli Co., of Boston, Mass., announcing "Näboli, the great discovery for preventing pain in filling teeth," with a "Capital stock of \$1,000,000 fully paid up and forever unassessable."

It seems that the Massachusetts Dental Society at the semi-annual meeting, held in Boston, June 3d and 4th, took action in the matter and passed the following resolutions, which reflect quite severely on the Näboli Company:

Resolved, That it is the duty of every dentist to understand the nature of all the materials and medicines which they use or are to use, before placing them in the mouths of their patients, and that any medicine, the

formula of which is kept secret, is not worthy of their confidence, or the confidence of the public.

Resolved, That the analysis of "Näbolî," made by able and competent chemists, show that it is no new discovery, but is composed of agents at the command of each dentist, and that no license is needed to use such old and well-known medicines.

Resolved, That the Massachusetts Dental Society, after a long discussion, are of the opinion that the "Dennett Dental Näboli Company" is a stock jobbing concern, designed to impose upon the public and blackmail the profession.

At the same meeting of the Society, according to the *Boston Herald* of June 7th, "the undersigned were appointed a committee to acquaint the profession throughout the country with the worthlessness of the claims of the 'Dennett Dental Näboli Company,' to be the owners of a grand discovery for painless dentistry, and of the nature of the compound they are licensing dentists to use. 'Näbolî' has been analyzed by able chemists, one of whom gives the following certificate :

MASSACHUSETTS COLLEGE OF PHARMACY, }
CHEMICAL LABORATORY, }
BOSTON, June 2, 1880. }

I hereby certify that I have tested the specimens of 'Näbolî,' for sale by the 'Dennett Dental Näboli Company,' which have been submitted to me, and find it to be a sweet oil, a glycerate of tannin and chloroform, all scented with rose.

B. F. DAVENPORT, M. D.,
Adj-Prof. of Analytical Chemistry.

The analyses show that the materials of which 'Näbolî' is composed have long been in use in dentistry for the same purpose. In proof of which see 'Harris' Dental Dictionary,' edition 1855, which says under the heading Tannic Acid : 'It is a powerful astringent, and the use of it has been recommended for allaying the sensibility of sensitive teeth, preparatory to their preparation for filling;' also 'Taft's Operative Dentistry,' page 241, edition 1868, which mentions the use of tannic acid and glycerine for obtunding sensitive dentine ; also the Dental Times, vol. 5, page 15, 1867, which speaks of the use of chloroform and tannic acid for relieving the sensibility of dentine ; and in many other publications. It is learned from the State archives at Hartford that this company, which claims a 'capital stock of \$1,000,000, fully paid up and forever unassessable,' had at the date of its organization only a copyright for a circular. No patent upon the compound called 'Näbolî' has, up to the present date, been issued. The company claims that a patent has been allowed ; but, until a patent is issued, it has no force to prevent the free use of the material which it aims to control. It is believed that no patent will ever be issued for 'Näbolî,' for the reason, as shown above, that it has long been public property. Many of the dentists who are advertised as licensees

were given their licenses for the sake of their names. The following, from Prof. Chandler, will explain itself :

BOSTON, June 5, 1880.

I hereby certify that the license to use 'Näboli' was given me by the company, and was signed by me with the understanding on my part that I was to investigate the material and report upon it to the profession. The use of my name in the advertisements of the company is entirely unauthorized, and gives a false impression. I disapprove of such methods of transacting business, and have therefore forbidden the further use of my name for that or any other purpose.

THOMAS H. CHANDLER.

Many of those whose testimonials, or names as references, are published in the pamphlet of the company, were stockholders on record May 5, 1880, and interested in the success of the company. Among these are Dr. Charles G. Davis, 1000 shares ; the wife of Prof. J. Jay Watson, 2000 shares ; Dr. C. J. Blake, 400 shares ; Judge C. W. Stanley, 8 shares ; Ole Bull, 5 shares, and many others, having from five shares upward. The resolutions published in the *Herald* of Friday, denouncing the company as a stock jobbing concern, designed to impose upon the public and blackmail the profession, were passed unanimously. As an offset to the recent publication in the Boston papers of the old testimonial, copied from their pamphlet, of the president of the Massachusetts Dental Society, we append the following letter, in which he apologizes to the Society, and reinstates himself in the respect of honest men, by a manly though humiliating confession of his wrong. For this manly course, the company, in revenge, published his old testimonial, and thus oblige us to publish his confession and recantation.

BOSTON, June 4, 1880.

I sincerely regret that, while holding the position of president of the Massachusetts Dental Society, I violated its by-laws by given a certificate, dated April 26, 1880, in favor of 'Näboli.' and hereby apologize to the society therefor. I acknowledge I made a great mistake in aiding the company in establishing its claims while I was pecuniarily interested, as a stockholder, in the success of the company. In view of my communication of an obtundent to Dr. Dennett, early in 1879, and of what I now know of the matter, I do not think the credit given in my certificate to H. E. Dennett, as a discoverer, is deserved.

C. G. DAVIS.

In conclusion, we would state that it is considered entirely unnecessary for a dentist to have a license to use such old and well-known remedies, and we must regard the stock of this company as utterly worthless.

L. D. SHEPARD, }
A. M. DUDLEY, } Committee."

Desiring to keep the profession posted on both sides of the question, we print portions of an advertisement of the Näboli Co., taken from the *Boston Daily Advertiser* of June 10th. After stating that the company does not propose to be diverted from its profitable business into an unprofitable controversy, the advertisement says :

"Messrs. Shepard and Dudley, constituting this committee, do not deny that Nābolī secures painless dentistry. They cannot deny it, for they have not tried it. The Society they represent cannot deny it, for it has not tried Nābolī or appointed any committee to investigate and see if it fulfils the claims made for it.

Messrs. Shepard and Dudley simply deny that this Company *owns* the discovery; deny that Nābolī is a discovery, and present the claim of Dr. Davis that he is the discoverer. Their object is to persuade dentists that they needn't buy Nābolī or pay for licenses. Their language is that they were appointed 'to acquaint the profession throughout the country with the worthlessness of the claims of The Dennett Dental Nābolī Company to be the OWNER of a grand discovery for painless dentistry, and of the nature of the compound they are licensing dentists to use.' * * * *

The following letter from this Dr. Dudley indicates that he would have been very glad to take the stock of the company if he could have bought it at a satisfactory price:

SALEM, May 24, 1880.

DR. ROBIE, Asst. Treas. D. D. Nābolī Co.:

Dear Sir,—Please inform me by return mail how many shares in the Nābolī stock you can sell me, and the *very lowest* price per share. You named 100 shares the other day. Is that the largest number you can sell, or will you sell more?

Very respectfully yours,

ALBION M. DUDLEY.

Messrs. Shepard and Dudley quote the analysis of B. F. Davenport that he finds the specimens of Nābolī submitted to him to be 'a sweet oil, a glycerate of tannin and chloroform, all scented with rose,' all of which, they say, works on dentistry have long recommended for relieving sensibility of dentine.

In reply we say:

1. That this Company owns a patent for Nābolī which was *allowed* by the United States, March 12th, 1880.

2. Nābolī is NOT 'sweet oil, a glycerate of tannin and chloroform.' Either the specimens submitted to Dr. Davenport for analysis were spurious, or Nābolī is beyond his skill to analyze.

He has not found out the ingredients of which Nābolī is composed. If these materials have long been used for 'relieving sensibility of dentine,' and are the same as Nābolī, how does it happen that painless dentistry was not attained until Nābolī was discovered? A compound even of these materials that had long been separately used for 'relieving sensitive dentine,' and would accomplish what Nābolī does, would be obviously patentable. But these materials are not the constituents of Nābolī. * *

They quote also the resolutions of the Dental Society denouncing this Company 'as a stock-jobbing concern, designed to impose upon the public and blackmail the profession.' It is undoubtedly a stock company, and the value of its stock depends on the value of its patent for Nābolī. If three thousand of the ten or twelve thousand dentists in this country and Canada pay \$20 a year for licenses, the income from this source, to say nothing of the profit on the sale of the compound, would give six per cent. on a capital of a million dollars. We do not think we have put the value of the patent for this and foreign countries too high. The absurdity of saying we 'blackmail the profession' by issuing to dentists licenses to use this invention on payment of a small license fee, and by giving the public the names of those who are authorized to use it, especially in view

of the fact that some dentists are pretending to use Nāboli who do not use it all, is obvious. No dentist is licensed without his consent, and no licensed dentist complains. * * * *

We say, therefore, that we have a valuable patent for a new invention of the greatest utility. The validity of that patent we are prepared to maintain in the courts against all who shall encroach upon our rights."

In the last paragraph of the above advertisement the Nāboli Co. say that they have a valuable patent for a new *invention* of the greatest utility. This we take to refer to the patent granted to Herbert E. Dennett for a *vial*, on May 11, 1880,—and which is the only patent *granted* to said Dennett that we are able to find in the *Patent Office Gazette*—and not for a "patent" for Nāboli which they say was *allowed* March 12, 1880. The allowance of an application for a patent does not constitute a patent, therefore we cannot see how a license can be legally granted for the use of a "patent" that has not been issued. However, it is not our present purpose to interpret or discuss the facts, but simply present them for the serious consideration of the profession.

SOME EXPERIMENTS WITH ALLOYS OF PALLADIUM FOR AMALGAMS.

BY THOS. FLETCHER, ESQ., F. C. S.

The following alloys were made from *chemically pure* metals, not what are known as *fine*. They were melted first, at a high temperature under a layer of charcoal, in a clay crucible, with constant stirring. They were then poured quickly into a thick and cold iron ingot mould, broken up and remelted three times to ensure uniformity as far as possible. As it is practically impossible to ensure correct or uniform results with very small quantities, the number of ounces as stated in the figures were used in each experiment. So far as they go they show the utter worthlessness of any alloy containing palladium; this is rather curious, as palladium alone with mercury makes an excellent plug. The results are so uniformly bad that I have, for the present, discontinued any experiments in this direction.

P=Palladium. S=Silver. T=Tin.

- P 1, S 5 Powdery and unmanageable.
- P 1, S 5, T 1 Ditto; both take up mercury easily.
- P 1, S 5, T 2 Similar to above.
- P 1, S 5, T 3 Very dirty to mix; makes a leaky plug.
- P 1, S 5, T 6 Similar to last.
- P 1, S 3, T 5 Very dirty; does not combine properly with mercury.
- P 1, S 6, T 5, Gold 1. Similar to last.
- P 1, T 4 Very dirty; does not set at all.

—*British Journal of Dental Science.*

NATIONAL DENTAL ASSOCIATION.

CALL FOR A MASS CONVENTION.

At their annual meetings in 1879, the Southern Dental Association and the American Dental Convention each appointed a committee invested with full power to adopt measures for the formation of a National Dental Association. The American Dental Association at its meeting in the same year appointed a committee to confer with these two committees on this movement and report to the Association at its meeting in Boston, August 3d, 1880. Members of these committees met at Saratoga, in August, 1879, and elected Professor J. Taft, General Chairman.

The Committees are as follows :

SOUTHERN DENTAL ASSOCIATION.

R. Finley Hunt, Washington, D. C.
T. T. Moore, Columbia, S. C.
S. J. Cobb, Nashville, Tenn.
T. S. Waters, Baltimore, Md.
J. R. Walker, New Orleans, La.
E. J. S. Gorgas, Baltimore, Md.

AMERICAN DENTAL CONVENTION.

R. B. Winder, Baltimore, Md.
J. G. Ambler, New York, N. Y.
F. A. Levy, Orange, N. J.
J. Taft, Cincinnati, O.

AMERICAN DENTAL ASSOCIATION.

A. W. Harlan, Chicago, Ill.
C. N. Peirce, Philadelphia, Pa.
F. H. Rehwinkel, Chillicothe, O.
H. J. McKellops, St. Louis, Mo.

A meeting of chairmen was held in New York, May 11, 1880, at which were present Professor R. B. Winder, Dr. R. Finley Hunt, and Professor C. N. Peirce, the latter representing (by proxy) Professor J. Taft, General Chairman. Professor Peirce was also present as a member of the committee of the American Dental Association.

This meeting, in accordance with the powers and duties intrusted to the committees, decided to call a Mass Convention, and fixed the time and place of meeting, Wednesday, August 11, 1880, at 11 o'clock A. M., in the city of New York, for the purpose of organizing a National Dental Association, to be composed of members of every State society in the country.

A constitution and all necessary regulations will be prepared by a sub-committee, and submitted for revision to a meeting of the full committees, to be held in the same city at 9 o'clock A. M., on Monday, August 9, 1880, so as to be thoroughly prepared for the action of the Mass Convention.

The importance of this measure requires that the whole time of the Convention shall be devoted to the business of organization.

All members of State societies and associations, and those intending

to become members, are cordially invited to be present at this Mass Convention and take part in its proceedings.

As this proposed National Association is intended to promote the best interests of the whole profession of the country, it is important and is especially urged that every State in the Union be represented by as large a number of Dentists as possible.

It is hoped, therefore, that *every* Dentist in the country who can *possibly* go to New York at that time will be present.

The following executive committees have been appointed to act together and make all arrangements for this meeting, such as procuring a hall, hotel accommodations, reduction of railroad fare, etc.

BY AMERICAN DENTAL CONVENTION.

J. G. Ambler, New York, N. Y.
Charles Merritt, New York, N. Y.
H. Townsend, Philadelphia, Pa.
J. H. Smith, New Haven, Conn.
E. D. Fuller, Peekskill, N. Y.
G. A. Mills, Brooklyn, N. Y.

BY SOUTHERN DENTAL ASSOCIATION.

W. H. Atkinson, New York, N. Y.
S. J. Cobb, Nashville, Tenn.
J. W. Selby, New York, N. Y.

BY NEW YORK STATE DENTAL SOCIETY,
to co-operate with other committees.

O. E. Hill, Brooklyn, N. Y. L. S. Straw, Newburgh, N. Y.

J. TAFT, General Chairman,
R. B. WINDER, Chairman Com. of A. D. C.
R. FINLEY HUNT, Chairman Com. So. Dental Ass'n.

AMERICAN DENTAL ASSOCIATION.

The American Dental Association will hold its twentieth annual session August 3d, 4th, 5th and 6th, 1880, at the hall of the Massachusetts Institute of Technology, Boston, Mass.

Hotel accommodations have been provided at the "Brunswick," Boylston, corner of Clarendon streets, opposite the Institute. Rates, \$3.00 per day—reduced from \$4.50. This hotel is new and first-class in every appointment. The hotel and hall are in near proximity to the business part of the city, yet free from the noise and turmoil necessarily incident to the business streets.

The Committee of Arrangements feel sure they will be able to provide opportunities to make the stay of the members pleasant and the meetings of the Association profitable.

THOS. FILLEBROWN,
Chairman, 1st Div. Ex. Com.

BROWN'S LATHE BATH.—We have been using this lathe bath for nearly a year, and after having tried baths of several designs, do not hesitate to recommend the Brown bath as the best we have ever had attached to our lathe. It is always in order, easily adjusted to the different sizes of wheels, and the wick, besides supplying just the required amount of water, serves to keep the wheel free from dirt.

MISCELLANEOUS NOTES.

A deplorable accident has taken place at the Grenoble Lycée. The professor of chemistry was lecturing on salts of mercury, and had by his side a glass full of a mercurial solution. In a moment of distraction he emptied it, believing he was drinking a glass of *eau sucrée*. The unfortunate lecturer died almost immediately.

A peculiar effect in portraits has been produced by M. Simmonar. A negative of the sitter is taken with his eyes open and another with his eyes shut; these are printed on the paper in such a way that the front and back images exactly coincide. The two sides of the paper when alternately illuminated, present a picture of the same person with his eyes opening and shutting, and if the light is shifted rapidly we have a winking photograph.

The Human Retina.—In a recent note to the Vienna Academy, Herr Salzer offers an estimate (based on numeration) of the probable number of optic nerve fibres and of retinal cones in a human eye. The number of the former he supposes to be about 438,000, that of the latter 3,360,000. This gives seven or eight cones for each nerve fibre, supposing all fibres of the optic nerves to be connected with cones, and equally distributed among them.

How "harsh and crabbed" scientific writing may sometimes become for the "dull fools" who require science to be popularised to them, was well illustrated the other day in the pages of a contemporary, in which about half a column ran on in this style :—"The now extinct Tasmanian race was, like the Australian, prognathous, platyrhine, microseme, microcephalic, but in relations of the length to the breadth of the cranium not dolicocephalic but mesaticephalic, *i. e.* between dolicocephalic and brachycephalic. The Bushmen, whilst mesaticephalic, platyrhine, microseme, microcephalic, are, as regards the upper jaw, not prognathous, but orthognathous."

New Method for Ascertaining the Melting Point.—Take a glass tube, wide at one end and drawn fine at the other. Place the sharp end of the tube on the surface of the melted matter, closing the upper part of the tube to prevent the liquid from entering. A small portion of it adheres to the glass and closes the lower end. When the liquid has solidified, the tube is filled with water or some other liquid not acting on the body to be tested, and the whole is plunged in a bath of the same liquid, which is then gradually heated. The tube is fastened to the stem of a thermometer used for stirring the bath, and when the solid melts, the water runs from the tube, and the temperature is immediately read and recorded.

At the latest meeting of the Scientific Committee of the Royal Horticultural Society, Dr. Masters introduced some specimens exhibited by Mr. Buchanan, gardener to Dr. Siemens, which had been grown under the influence of the electric light, and which were accompanied by others, treated in the manner described below: 1. Three pots of seedling mustard, one of which had been exposed to the electric light, one to the

daylight, and one to both—other conditions being equal. In this case there was not much difference in point of vigor, but the plant which had been exposed to solar and electric light was darker in color. 2. Two buds of Countess of Oxford rose, one exposed to the electric light for forty-eight hours, one grown as usual. The bud under the electric light was considerably more advanced. 3. Two spathes of *Calla Æthiopica*, one grown in the ordinary manner, the other subjected for forty-eight hours to the electric light. In this case the difference was exceedingly striking, the plant which had been grown under the electric light being greatly in advance of the other. Cut specimens similarly treated manifested an equally striking difference. 4. Three pots of carrots, three in each pot; one had been exposed to continuous light, first solar, and then electric; one had been exposed to the electric light only, and one had been exposed to daylight only—all other conditions being uniform. In these latter specimens there was very little difference between the plants grown under solar and those under the electric light, but the plants subjected to both were greatly superior in vigor and color.

BOOK NOTICES.

THE ORIGIN AND FORMATION OF THE DENTAL FOLLICLE. The First Memoir on the Development of the Teeth. By Drs. Ch. Legros and E. Magitot. A translation from the French, with introduction and notes, by M. S. DEAN. Authorized and reviewed by Dr. Magitot, the surviving author. Including all the illustrations of the French work, with a number of additional illustrations, selected and original. Chicago: Jansen, McClurg & Co., 1880.

We received this work so late that we find it impossible to notice it properly with any satisfaction to ourselves or our readers. We therefore copy nearly all of Dr. Dean's preface, as being much more explanatory of the scope of the book than anything we could write at present.

"An apology will reasonably be expected for presenting this translation to the profession. It will require but few words, and I cheerfully offer it. The deficiency and inaccuracy of the literature, in our own language, on the origin and development of the 'tooth-germ' and its associate parts, render it almost worthless, as compared with the more recent researches of foreign investigators. The only exception I would make is that of the valuable work of Professor Tomes. If anything more is required, I refer the reader to the following pages, which, so far as I have been able to do justice to the authors, will be their own apology.

Some of you will remember that, nearly twenty years ago, one of the authors of this memoir, Dr. Magitot, in connection with Dr. Ch. Robin, wrote a treatise entitled, *The Genesis and Development of the Dental Follicle, to the Epoch of the Eruption of the Teeth*, a large portion of which was translated for the *Dental Cosmos*.

While the writers of that treatise gave a detailed and elaborate account of the development of the jaws and their anatomical constituents, that portion devoted to the origin and formation of the dental follicle was in many respects incomplete, and in some particulars erroneous.

The improved methods of preparing sections for microscopic examination which have since been adopted, together with the experience gained by many years of study, which one of these authors has since devoted to this and kindred subjects, has enabled him, with the aid of his eminent collaborer, not only to correct the errors of that work, but also to describe these parts more minutely, and with greater exactness than had been hitherto possible.

While the present work traverses a portion of the ground gone over by the previous

writers, it is, nevertheless, a distinct memoir, rendered more comprehensive, and more complete in detail, by the study of the development of the dental system not only in man, but in many other mammifera.

Although the work may not be considered as a 'practical treatise,' in the ordinary acceptance of the term, yet it contains valuable lessons which may be applied in preventing the disastrous consequences of those exanthematous diseases which are so liable to arrest or pervert the nutritive supply to these developing organs, and which often result in the disfigurement, and sometimes in the entire loss, of the teeth. Hence its suggestions should not be confined to the dental surgeon alone, but should be made available by the medical practitioner, who, at the present day, retains almost undisputed possession of this sadly neglected field of practice.

The illustrations, including copies of all those contained in the original, were executed by Baker & Co., of this city; and, while all of them, I think, compare favorably with the woodcuts found in similar works,—some of them showing the minute detail of the parts during the different stages of development,—are remarkably faithful to nature.

How well the work of the translator has been done must be left for others to decide. It may be proper to state, however, that it has been submitted to Dr. Magitot, and meets with his unqualified approval.

The conversational style in which many of the notes have been introduced, may be regarded by some as unsuited to the character of a severely scientific work. However this may be, it certainly affords the translator opportunities of presenting, in an easy and familiar manner, the views of different authors, and some other valuable matter, which he believes could not otherwise be introduced without apparent abruptness. He believes, also, that the plan here adopted will relieve the monotonous strain upon the less scientific reader, and that the facts thus brought out will be more vividly impressed upon most minds than if presented in the ordinary way. If this be so, no other defense is necessary.

The adjectival terms denoting the species of embryos—as *equine*, *bovine*, etc., and corresponding to that of *human*—which have been adopted in the translation, I think, cannot be regarded with disfavor; the propriety, if not the necessity, of their employment in works of this kind seems to me unquestionable."

PRACTICAL INFORMATION ABOUT THE TEETH. A book for the people.

By ARTHUR HOLBROOK, D. D. S. Milwaukee: Published by the Wisconsin State Dental Society.

The circular accompanying the above named book says: All dental practitioners have realized the necessity of properly educating their patients, and have reaped the practical benefit of their instruction, as far as they have been able to impart it. In attending the duties of a full practice all have felt the impossibility of affording time to give needed information, answer questions, and direct their patients in all the essentials of successful preservation of their teeth.

It was to fill this want that this little book was written—to enable the dentist to place in the hands of his patients the information necessary to their welfare. It answers all questions the patient is likely to ask. It gives valuable information on points to which the patient is not likely to refer. It is concisely and interestingly written, and will be read with profit by dentist as well as patient.

This is not a money making enterprise. The Society proposes to furnish the book at the actual cost of getting it before the profession, deeming the benefit to the practitioner and his patients sufficient reward for their trouble. Copies can be furnished at the following rates: 1 copy, 25c.; 15 copies, \$2.00; 25 copies, \$3.00; 50 copies, \$5.50; 100 copies, \$10.00. Sample copy post paid for 15 cents. Address orders to Dr. Jas. S. Perkins, Sec., 130 & 132 Grand Ave., Milwaukee, Wis.

THE DENTAL ADVERTISER.

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EXPERIMENTING WITH NEW REMEDIES.

In reading an account of the annual meeting of the Antivivisection Society the other day we wondered what the present state of medical science would have been had the members of that society had things their own way during the last fifty years. Experiments upon animals to discover remedies for poisons or for diseases, or to test the action of some newly-discovered drug or chemical, would never have been allowed. Let it not be supposed that we would, for one moment, advocate the infliction of unnecessary pain on animals, but we confess that we have no sympathy with those who refuse, under any circumstances, to tolerate experiments on animals, even though they be conducted with the sole object of curing disease and relieving human pain. We will not enter here into the consistency of these humanitarians—though we have no doubt that many of them do not hesitate to wear, for the sake of fashion, birds in their bonnets, and furs on their backs—but will content ourselves with pointing out how important it is that those who are devoting their lives to the curing of disease should not be fettered by absurd Acts of Parliament, or useless legislation of any kind. Disease is, as Dr. Pye Smith said, at the Sheffield meeting of the British Association, a purely subjective conception. The disease of a host is the health of the parasite, and we cure a human sufferer by poisoning the animals or plants which interfere with his comfort. All that the art of medicine can do is to apply a knowledge of natural laws of mechanics, and of hydrostatics, of botany and geology, of chemistry and electricity, of the behavior of living cells and organs when subjected to the influence of heat and of cold, of acids and alkalies, of alcohols and ethers, of narcotics and stimulants, so as to modify certain deviations from

ordinary structure and function which are productive of pain or discomfort, or death. Keeping right, and setting right, the human body must therefore rest upon a knowledge of its structure and its actions, just as a steam engine or a watch cannot be mended upon general principles, but only by one who is familiar with their construction and working, and who can detect the source of their irregularity.

Is it quite true, as our contemporary *Nature* recently remarked, that during the last two or three decades, and especially during the last decade, a change has been going on in therapeutics—that is, in the doctrines of remedies for disease—of so fundamental a character, that it may, with reason, be called revolutionary. The change, however, is one which so far is but little “understood of the people ;” is one, in fact, of which they are almost entirely ignorant. If the question were put to the several members of either Houses of Parliament—What reasons determine a doctor to give such and such a drug for such and such a disease, and what led to the drug being first used for such a purpose? the answer would, in all but exceptional cases, run somewhat as follows: “A doctor gives a particular drug in a particular case, because he knows from the experience, either of himself or of others, in similar cases, that it is more likely to do good than anything else (or than nothing at all). As to the first use of the drug, that I believe is, in most cases, lost in obscurity ; and I am told that the use of more recent drugs has either been stolen from some village crony or borrowed from some savage, or suggested by the instinctive actions of some domestic or wild animal. I understand that some doctors are fond of ‘making experiments,’ *i. e.*, of giving new drugs in this or that disease to see if they can cure it. I do not know what reasons lead them, in a particular case, to experiment with a particular drug ; but I suppose they have some reasons. I dare say accident sometimes suggests a possible cure ; and I have a sort of an idea that very often one remedy after another is tried at random, in the hope that one of them at least may prove beneficial.” To judge of the speeches and writings put forth at the time of the framing of the Vivisection Act, neither the legislators themselves, nor even the more intelligent and educated doctrinaires who pressed for legislation—to say nothing of the common ignorant agitators—had any conception that the use of many popular and successful remedies was the result of the recent labors of able and zealous men who had devoted themselves to the *scientific* investigation of the action of drugs, and other agents, on the animal economy.

In former times, undoubtedly, therapeutics were, to a large extent, purely empirical and, indeed, traditional. But, in spite of the ignorance of the ruling classes and public in general, in spite of the obstructions caused by a clumsy legislation, a great change is taking place. It can no longer be said, as was once said, that a doctor is “one who puts into a

body, of whose actions and powers he knows little, a substance of whose actions and powers he knows less." While physiologists in general have been gaining fuller and fuller insight into the mysterious working of the living economy, a number of men have, for years past, been investigating, with the help of the most exact methods and appropriate instruments, and with all the light afforded by modern chemistry and physics, the more special problems still, however, physiological in essence, concerning the changes induced in living bodies by the substances known as drugs or poisons. Already even many precious hints as to therapeutic utility have thus been gained; already many previously obscure bodies have thus become popular remedies, and in a double sense, "in everybody's mouth." Something has been done to show that for the new remedies of the future we shall have to apply, not to some wandering gipsy or sagacious dog; but to the experimental pharmacologists, whose duty it will be to subject to a rigorous inquiry every newly-discovered chemical body a natural product, with the view of estimating its therapeutic promise.

It cannot, of course, be said that the science of pharmacology or of therapeutics is at present ripe and complete; the knowledge is as yet in the early fermentative stage; a great deal of the work done is of a tentative, preparatory kind; and the results cannot as yet be fairly judged. But to those who know what has been done, and what is being done, the greatness and the importance of the change in therapeutics which is thereby being inaugurated, seems almost incapable of exaggeration; they look forward with confidence to a future, and possibly not far distant, masterly over disease, compared with which the practice of to-day will seem hardly more than blind stumbling.—*The Chemist's Journal, London.*

THE NECESSITY OF DENTAL APPOINTMENTS IN THE ARMY AND NAVY.

BY GEORGE H. PERINE, NEW YORK.

About the year 1858 attention was called to the subject of the appointment of dentists in the army and navy, and the writer, who was at that time the editor of the *New York Dental Journal*, took an active interest in the matter; but, although the subject was more or less agitated by the dental press throughout the country at intervals thereafter, it was not until August of the year 1861 that the American Dental Convention (at the session held in New Haven, Conn.) appointed a committee of five, consisting of Drs. W. H. Atkinson, Cleveland, O.; G. H. Perine, New York; B. W. Franklin, New York; J. D. White, Philadelphia, and I. J. Wetherbee, Boston, to inquire into the advisability of the course. They

conferred with Surgeon-General William A. Hammond, and the matter was very favorably received by him. But no positive action was taken until 1868, when a bill authorizing the appointment of dentists in the army and navy was drafted and presented before both houses of Congress by Senator Hamlin, of Maine, which was referred to the Committee on Military and Naval Affairs, by whom, however, no decided steps were taken. A second bill was, during the Forty-second Congress, laid before the House by the Hon. De Witt Townsend, advocating dental appointments at the United States military and naval academies, and, as before, the subject was referred to the committee, who failed to bestow upon it the attention so important a matter deserved. A dentist has, it is true, been appointed at the Annapolis Academy, with the rank of assistant surgeon, but beyond this nothing has been done in the direction referred to. It strikes us as not a little singular that a movement of such importance has of late received so little notice from the members of our specialty. To those who have given the subject consideration, the necessity of appointments of the character we refer to must be apparent. Sound teeth are among the physical requirements of soldiers and sailors, and certainly no physician or specialist will deny that attention to the preservation of these organs does much towards preserving the health of those in our country's service, and that the evident lack of interest displayed by the government is highly reprehensible. For some years past the establishment of dental chairs in the State medical colleges and the treatment of dentistry as a specialty of medicine have been more or less agitated, and strongly advocated by a large number of the leading members of the profession, and it is doubtful whether any stronger argument can be advanced in favor of such a movement than that contained in this article. A union of dentistry with medicine would be a decided step gained in favor of the appointments herein suggested, in making which no additional expense would be incurred by the government. Doubtless much of the opposition which advocates of the cause have to contend with has arisen from the fact that few, if any, of our army and navy surgeons possess a knowledge of dentistry, and that the appointment of physicians practicing our specialty would necessitate a new order of things in this particular direction. At the military stations of the far West, and on board naval training-ships, the services of a dentist are often required, and much suffering is at times experienced for the lack of proper treatment of diseases of the oral cavity. This fact in itself should prove a sufficient incentive to a vigorous movement on the part of not only those practicing our specialty, but physicians also. There is no excuse for the indifference displayed by the government in a matter bearing so directly upon the sanitary condition of its servants. There is little doubt but that those members of our specialty constituting State dental associations

could, by a joint effort, enlist the attention of a sufficient number of our national representatives to insure the successful accomplishment of this very necessary measure.—*Cosmos*.

ANÆSTHESIA: ITS DANGERS AND HOW TO MEET THEM.

The following summary of this subject by Dr. Ranney, in the *New York Medical Journal*, is so concise, clear and exhaustive that we copy it for the benefit of our readers :

“The conditions rendering anæsthetics dangerous are : (1.) Fatty degeneration of heart (a prominent contra-indication). (2.) Previous alcoholic history. (3.) Brain tumors and degenerations. (4.) Respiratory obstruction from swollen epiglottis, enlarged tonsils, œdema glottidis, laryngeal paralysis, thoracic tumors, or aneurism. (5.) Emphysema and obstructed pulse circulation, from engorgement of right heart, and deficient heart-power. (6.) Valvular lesions, provided compensatory hypertrophy is not *proportionately* developed. (7.) Incomplete anæsthesia during *painful* surgical procedures, causing death from shock, as the result of peripheral irritation.

“Muscular debility and weakness from exhaustion, if otherwise uncomplicated, prove rather aids to anæsthesia than contra-indications.

“*Preventive Measures against Danger*.—These may be comprised in the following rules : (1.) A thorough examination for sources of danger should always be made previous to administration of an anæsthetic. (2.) Never administer on a full stomach, an anæsthesia of the glottis prevents expulsion of vomited matter from the larynx, in case it enters by regurgitation. (3.) Never administer after long *fasting*, as absence of nutrition may tend toward cardiac paralysis. (4.) Give one or two ounces of whiskey before administration. (5.) Nussbaum (Berlin, 1863) suggests that a hypodermic dose of morphia be given before the administration of the anæsthetic ; the results which he claims being, first, that it prolongs the anæsthesia, and, second, that less anæsthetic is required. (6.) Avoid all excitement to the patient from fear, sight of instruments, too many spectators, etc., all of which tend to induce shock. (7.) Have appliances for resuscitation at hand, and plenty of fresh air during the administration of the anæsthetic. (8.) In chloroform, mix only three and a half per cent. of the vapor with air to insure safety (Simpson’s rule being one-half drachm on handkerchief). The specific gravity of chloroform being four times heavier than that of air, a saturated handkerchief, if held close to the mouth, will displace the air and give a dangerously large percentage of chloroform vapor. (9) In

ether, the respirations alone need be watched during its administration. In chloroform, however, the respirations and the pulse need both to be carefully noted.

"Treatment of Dangerous Symptoms.—(1.) Nélaton's plan suggests immediate inversion of the patient in case of heart failure. (2.) Inhalation of gtt. v.-x. of nitrite of amyl may be given early, the tongue being drawn out to lift the epiglottis. (3.) Stimulation, in case respiration is affected, but not entirely suspended, should be employed by means of either ammonia to the nostril, cold douche, or injection of ammonia into the veins. (4.) Galvanism, if employed, may be administered by the following methods: (a.) Herapath's method (*Lancet*, 1852). The positive pole is placed to the nostril and the negative pole over the diaphragm. A reflex action is thus excited between the fifth pair and the pneumogastric. This is used chiefly in case of respiratory failure. (b.) Duchenne's method. The poles are placed directly over both phrenic nerves, on a line with the fourth cervical vertebra. This also serves to stimulate respirations. (c.) Packard's method (*Amer. Jour. Med. Science*, 1865). One pole is placed over the upper dorsal spinous process, and the other pole over the apex of the heart. By this method cardiac contraction is induced. (5.) Tracheotomy and inflation of the lungs by a catheter passed down the trachea, as suggested by Langenbeck (Berlin, 1859), may be resorted to in desperate cases. (6.) Finally, acupuncture of the heart has been suggested, but as yet is not well verified as a safe procedure, nor can it conscientiously be recommended.

DOUBLE FRACTURE OF THE INFERIOR MAXILLA, WITH TREATMENT.

BY RICHARD H. TUCK, L. D. S., ENG.,

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I have thought perhaps the above case might prove interesting to the profession on account of its being somewhat rare, and one that does not often fall to the province of a dental surgeon for treatment.

On May the 11th, James —, æt. 34, who had been thrown from a cart, the wheel of which passed over his face, was admitted to the Infirmary under the care of the surgeon for the week, who after careful diagnosis found two distinct fractures in the inferior maxilla, one at the symphysis taking a slightly oblique direction, and the other between the second and third molars inclining backwards. The case being handed over to me for treatment, my first endeavor was to get as good an impression as was

possible, which, it is hardly necessary to say, was attended with difficulty. Obtaining one, however, sufficiently good to work to, after cutting the model in halves in order to place the piece representing the broken line in its proper position, a thin vulcanite plate was made with holes drilled opposite each tooth, commencing at the second bicuspid on either side; when this was placed in the mouth I firmly fastened the teeth to it with silver suture wire. Then fitting an ordinary gutta-percha splint padded with wadding, I secured the whole with a four-tailed bandage, which helped most materially in keeping the bone in its place. For the first fortnight there was rather much suppuration, which was greatly allayed by the constant use of permanganate of potash, although it continued to a slight degree for about six weeks, probably occasioned by a small sequestrum of bone. At the end of the fifth week the splints were removed, and the points of fracture were found to be firmly united. I have seen the patient since his discharge, and find he is doing well, the suppuration having quite stopped.—*British Journal of Dental Science.*

CASE OF FRACTURE OF THE TEETH PRODUCING SEVERE SYMPTOMS.

(UNDER THE CARE OF DR. WILKS.)

[Communicated by W. HALE WHITE, M. B. Lond., House Physician.]

E. M—, a boy, æt. 13, admitted into Stephen Ward on May 17th, 1880. Three days before admission had a quarrel with another boy, who struck him in the mouth with a scoop, breaking off the upper half of his two central incisors, and the anterior surfaces and upper halves of his two lateral incisors, the pulps being quite exposed. Was quite well up to this date. He cried a little after the accident, but went on with his work. He did not swallow the fragments of teeth. On the same evening he had diarrhœa, his bowels being opened four times. Next day he had pain in the head and diarrhœa, the bowels acting six times. On the day after he had swimming in the head, shivering, pain in the abdomen and teeth; the bowels acted nine times. On the day of admission his bowels had been opened five times by 10 A. M., and he had vomited twice. When first seen he had a hot, dry skin, and temperature 100·2°, pulse 120, together with pain in the abdomen. The tongue was furred and the lips tender, but without sore. He is thirsty, and all the organs of the body but the teeth are normal. The four lower incisors are broken off about a third of their height from the gum. The red pulp is exposed; it does not bleed, but is excessively tender. Put on milk diet. A day or two after admission the temperature fell to normal, the diarrhœa stopped, and all

symptoms of fever passed off. Four days after admission, the pulps were extirpated, under chloroform, by Mr. Moon, and the cavities plugged with cotton-wool soaked in carbolic acid. This was re-applied six days afterwards, and four days after that the cavities were stopped with gutta-percha, and the boy went out well.—*Med. Times and Gazette.*

VULCANIZER EXPLOSIONS.

A Vulcanizer explosion occurred at a town in Pennsylvania, August 21st, through which a young man lost an arm. It is such a good example of the ignorance and foolhardiness sometimes displayed in the management of Vulcanizers, that we deem it worthy of a somewhat extended notice. From the account in a daily paper, it appears that the student had "taken his apparatus to Mr. Topper's blacksmith shop to assist him in getting up the proper temperature, and he got it up so well that the Vulcanizer exploded, a portion of it striking him in the arm near the elbow, inflicting a wound that necessitated amputation."

We have no further particulars of this deplorable affair than the above, but have heard it rumored that the vulcanizer was put into the blacksmith's forge, when the thermometer was known to be out of order.

Accompanying every Vulcanizer is a four-page circular, headed "PLEASE READ THESE DIRECTIONS CAREFULLY AND PRESERVE THEM FOR REFERENCE." We have abundant evidence that these circulars are seldom read by dentists; indeed, it is the common practice of some dentists to consign to the waste-basket *all* circulars that are sent them, even when their contents might be of vital importance in throwing light upon some imperfectly understood points. Now, if the preceptor of this young gentleman had preserved these Vulcanizer directions and posted them in his laboratory for the instruction of his student, this deplorable accident would probably never have occurred, as a thoughtful person would never think of placing a Vulcanizer in a forge, after giving these directions proper consideration. A proper heating apparatus is sent with every Vulcanizer, and the person who uses in its stead a cook stove, parlor stove, or blacksmith's forge, takes his life in his own hands.

As a precautionary measure, we copy a portion of the above-mentioned Vulcanizer directions, hoping that the re-publication may prevent carelessness in the use of Vulcanizers:

"This Vulcanizer has been tested by hydrostatic pressure, and has proved itself capable of withstanding five hundred pounds to the square inch, over six times the pressure at the vulcanizing point. This fact is given as an assurance of ample strength, but it forms no excuse for careless management.

If every dentist were thoroughly informed as to the nature and properties of steam, accidents from vulcanizers would be almost unheard of. For their information the fol-

lowing table is subjoined. The fact should be borne in mind that a vulcanizer is subject to the same laws and conditions as a steam boiler, which it is in fact ; and although it is safe and easily operated, it may, by a little carelessness or ignorance in its management, become almost as dangerous as a bombshell.

TABLE OF THE ELASTIC FORCE OF STEAM.

FRENCH ACADEMY EXPERIMENTS.

Degrees of Temperature, Fahrenheit.	Elastic Force, in lbs. per square inch.	Degrees of Temperature, Fahrenheit.	Elastic Force, in lbs. per square inch.	Degrees of Temperature, Fahrenheit.	Elastic Force, in lbs. per square inch.	Degrees of Temperature, Fahrenheit.	Elastic Force, in lbs. per square inch.
212.	14.7	300.28	66.12	341.78	117.6	392.46	220.5
233.96	22.05	307.05	73.5	350.78	132.3	398.48	235.2
250.52	29.4	314.24	80.85	358.88	147	403.82	249.0
263.84	36.7	320.36	88.2	366.85	161.7	408.92	264.6
275.18	44.15	326.26	95.55	374.00	176.4	413.78	279.3
285.08	51.45	331.70	102.9	380.66	191.1	418.46	294.
293.72	58.8	336.86	110.85	386.94	205.8		

It will be noticed that as the temperature rises, the pressure of Steam increases in a constantly increasing ratio for equal increments of heat ; the pressure being more than doubled by the addition of fifty degrees to the temperature. This fact will show the *absolute necessity* of care and watchfulness while vulcanizing. For additional security, each vulcanizer is provided with a safety disk, which is intended to give way at about 340°. It must not be relied upon too implicitly, as no such arrangement can be made *absolutely certain* in its action. Moreover, as there is a constant liability in any kind of apparatus to get out of order, too much dependence should not be placed upon the indications of the thermometer. If the usual size flame does not heat the vulcanizer in about the usual time, the condition of the thermometer should be ascertained at once. The bulb will probably be found cracked or broken. A second tube and scale should always be kept on hand, ready to be substituted in case of any accident. If the thermometer case should be unscrewed from the vulcanizer top, a small cup will be seen in the nipple from which the case is removed. This cup should contain sufficient mercury to insure its touching the bulb of the tube when the thermometer case is screwed down properly. This makes a *metallic connection* between the thermometer bulb and vulcanizer cap, and is *absolutely necessary* for the proper indication of heat by the thermometer. If the safety plug should blow out at a degree of heat lower than 340°, it is probably because there is not sufficient mercury in the mercury cup and the thermometer should be removed and more mercury added.

In heating up, let on just flame enough to cover the bottom of the boiler, *not to flow up the sides*. A large flame overheats the outside, burns the packing, and damages the whole apparatus, without materially hastening the rise of the mercury.

If alcohol or kerosene is used, let the wick of the lamp be quite short. If gas is used, a flow of 2 to 2½ feet per hour is all that is required in heating up. After the mercury is up to the desired point, a very small flame will keep it there."

A great deal of unnecessary annoyance is experienced by dentists in the matter of blowing out the safety-disks, from the practice of filling or nearly filling the Vulcanizer with water. At least half an inch, or better, one inch of steam room should always be left. Water expands one-twenty-second of its volume by an increase of temperature from the freezing to the boiling point, and its rate of expansion increases with its temperature, so that at 320° it will have expanded at least one-tenth of its original volume. As water possesses but little elasticity, this force

is practically irresistible. A Vulcanizer built of steel an inch thick could not stand the strain it would be subjected to if filled so that it had only one-twentieth of its capacity for steam room, and heated to the vulcanizing point. Some years ago, when the fusible safety-valve was in use, a Whitney Vulcanizer was returned to the manufacturers, which was stretched, or enlarged in its diameter nearly a quarter of an inch. A series of inquiries revealed the facts: 1st. That the enlargement was gradual, several vulcanizations having been accomplished before the whole amount of enlargement was attained. 2d. The Vulcanizer had not been overheated. 3d. The dentist always used soft water and *always filled his Vulcanizer brim full*. This fact accounted for all the trouble. When the copper disk is used, the Vulcanizers cannot be subjected to such a heavy strain as the one before mentioned, as the disk will give way by pressure, irrespective of the temperature.

By experiment it is found that a No. 2 Hayes Boiler, if filled with cold water, will blow out the copper disk at about 310° . Under similar circumstances, with the No. 3 Hayes Boiler it will give way at about 260° , there being a greater mass of water to expand in the case of the No. 3 boiler. With the Whitney Vulcanizer, which can be filled nearer the top than the Hayes Boiler, the disk will give way at a still lower temperature.

In view of the foregoing, the absurdity of the following letter will be apparent:

"The Vulcanizer you sent me is a total failure. On Saturday it blew off at safety-valve four times, when the thermometer indicated 320° . We tried two disks instead of one, and they blew through. On yesterday the Vulcanizer seemed to work better, and had been standing at 320° for twenty-three minutes, when off it went, blowing through the bottom, etc."

An inquiry directed to these parties elicited the reply that "at the time the Vulcanizer *was full of water*."

Only those who repair Vulcanizers can have any knowledge of the amount of abuse to which they are subjected. The wonder is not that they explode, but that explosions are so infrequent. The safety-disk is often replaced by a piece of metal too thick to give way under any reasonable amount of pressure, and nothing but an explosion with a narrow escape with life will convince some dentists of the foolhardiness of thus tampering with the only safeguard against careless overheating, to avoid the occasional annoyance occasioned by the blowing out of a disk. It is nothing uncommon to see the bottom of a Vulcanizer bulged into almost a hemispherical shape, and the sides expanded a quarter of an inch, the safety-valve plugged up, and the whole apparatus in such a condition as to betoken the most extreme neglect. In conclusion, we can only say that a Vulcanizer is not a thing to be trifled with, and that the person in charge of one should be careful, and well informed as to its proper use.

DENTAL EDUCATION IN HUNGARY.

BY JOS. ARKÖVY, DR. OF MED. AND SURG. MASTER OF DENT.

In Hungary, as well as in the politically and materially connected Austria, a special dental education does not exist. Neither Hungary nor Austria possesses such a distinguished institution as, for example, the Dental Hospital of London, and the London School of Dental Surgery; one consequence of that is, that dental education is taken up in the course of the general medical education, through which it has all right to rank with, and be as respected as, any other speciality.

There are in Hungary three universities, which are Government Institutions—that is, they are high schools, which are inspected by Government authorities, conducted in the highest manner, and with the rights of administration of the interior affairs secured to the faculties. One of the oldest in Europe is the university of Budapest; those of Kolozsvár and of Zagreb have been founded but a few years. In Zagreb there is not, as yet, any medical faculty. Budapest is the only university which at present possesses two chairs for dentistry. The one confers the title of professor, the other of lecturer. This last office is now vacant. In former years, to meet the need felt for medical men in the country, a course of education existed for so-called licentiates in surgery; this provisorious system was abolished about nine years ago. The licentiates at that time were permitted to practice dentistry, but since then only those who are doctors of medicine are admitted to the dental examinations.

In giving the legitimate way of acquiring a diploma as dentist, I will keep in mind the regulations respecting the education and examinations of candidates in Great Britain.

The preliminary general education in Hungary, where education is compulsory, is obtained partly through four elementary classes, and partly through the eight classes of the gymnasiums. Pupils are received into the former when five or six years old, and into the latter from nine to ten years old. No age is named at which a pupil may go to the universities. The student leaves the gymnasium when he has passed what is called the examination of maturity, which comprises all branches of learning. The testimonial gives him a right to enter the university. In order to spare the reader the particularizing of every branch of education, I will only mention that a scholar in the fourth or fifth class is quite equal to one who can pass an English preliminary examination. The student at the university, during five years, has to be present at all the medical lectures, and to make practical exercises similar to the requirements of English licensing bodies, before he is admitted to the primary examination, and after an interval of several months he is admitted to the pass-examination.

Four years ago a new system of examination was introduced, according to which the former two examinations were divided into severally oral, written, and practical divisions; and special branches, as surgery, midwifery, ophthalmology, were included. Only after all of these examinations does the candidate obtain the diploma of a Doctor Universæ Medicinæ.

The special lectures in dentistry embrace to the fullest extent the anatomy of the mouth—embryology, physiology, pathology, surgery, demonstrations on some models, and different subjects out of the odontotechnic. The special examination is oral, and consists principally of questions relating to the teeth, mouth, and adjoining parts.

The university, as also the great town's hospital, has no separate clinical departments for teeth and mouth diseases, and therefore the young dentist is obliged to acquire practical knowledge during the years before or after his studies in the technical and operating places of some celebrated dentist. Still, this last method of acquiring practical knowledge in dentistry was not required to secure a diploma, as the university had only to watch over the examinations of scientific knowledge. The only requisite necessary to pass an examination in dentistry was to have attended during one session the lectures of the professor of dentistry. *Now*, everybody may, or may not visit these, quite as the student pleases.

From what has been already said, it is evident that not only is there no pretension in Hungary towards a special school for dentistry, but that any one who desires to follow this profession must get the practical knowledge, or rather necessary experience in some manner, apart from the university which only imparts scientific knowledge.

What has just been written upon a dentist's education in Hungary can also be said of Austria.

In respect of practice, the same may be said of the whole monarchy of Austro-Hungary. But on the other hand, in Hungary, according to Government laws, no one may practice with a foreign diploma unless such practitioner receive special admission to practice by passing a proper examination before the medical faculty. The number of dentists in Hungary is very small, for in the capital, with about 400,000 inhabitants, there are at present, only eleven. Here, as everywhere else, unqualified persons exist, and practice on the public. A few years ago there was a proposition moved by the medical faculty to the Minister of Public Education to set on foot a special School for Dentists, but, fortunately, nothing has yet been done. It would be more advantageous for the profession should this idea not be carried out, as it proposes to allow licentiates in dentistry, *only*, to practise, persons not of necessity possessing scientific knowledge, which, for Hungary, could not be regarded as a step towards progression.

Every Doctor of Medicine who passed his examinations in the old system had the right either to go through the examination for a dental

diploma, which gave him the title of Master of Dentistry, or he had also the full right to choose dentistry for his special line without any dental diploma; only on the basis of being an M. D. Since the new system of examination became general, the title of Doctor Universæ Medicinæ is considered to imply also dentistry, as well as otology, laryngology, or any branches of medicine and surgery. In consequence of that new system all kinds of special diplomas ceased to exist.—*British Monthly Review of Dental Surgery.*

TRAGEDY IN A DENTAL OFFICE.

On July 26th, at about 5 o'clock, a terrible tragedy occurred in Oakland, California, the persons concerned being E. F. Schroeder, exchange teller in the London and San Francisco Bank, and Dr. Alfred Lefevre, a prominent dentist of Oakland. The latter was shot and killed by Schroeder, who visited him in his office, and fired two shots, one of which entered Dr. Lefevre's left side, ranging downward through the intestines and lodging in the opposite hip. The second shot missed, but the right side of the head and ear were powder-burned.

A San Francisco daily states that Mr. Schroeder has refused to make any statement regarding the affair, and the following particulars have been gathered from persons not directly interested:

According to the reports, it appears that Mrs. Schroeder, who is a daughter of Rev. Horatio Stebbins of San Francisco, went down to the train on the day of the shooting, to meet her husband on his arrival from San Francisco. She was accompanied by her little daughter, some three years of age. Upon meeting her husband, Mrs. Schroeder is represented to have told him that on the Saturday previous, while under the influence of chloroform in Dr. Lefevre's office, a felonious assault had been made upon her by the dentist in question.

After hearing the story, Schroeder went with his wife and child to Dr. Lefevre's office, corner of Eighth street and Broadway, and, mounting the stairs, entered the Doctor's office. Advancing within a few feet of Lefevre, Schroeder pulled a pistol and fired two shots. One report states that Schroeder said, "Dr. Lefevre, this is my wife; take this," (firing) "and take that" (firing again). The shooting took place at 4:50 o'clock, and Schroeder was almost immediately arrested. On the way to the City Prison, Schroeder said: "I hope to God I have killed him; if I haven't, I will. A man cannot seduce my wife and live."

Dr. Lefevre, upon being shot, fell on the threshold of the door leading from the operating room to the private working room. He was raised and placed upon a sofa and was soon surrounded by physicians who had been summoned. The wound was fatal, Dr. Lefevre surviving about forty minutes.

There are many people who believe that Mrs. Schroeder's charge against the deceased was purely illusory. It is well known that such hallucinations are not uncommon after the administering of chloroform. Some remarkable cases exist where hallucinations of this nature have taken the form of absolute conviction in the minds of the persons laboring under them, although there existed abundant evidence to prove that this conviction was utterly unfounded.

Dr. Lefevre was quite well known in Western New York, having been a student in the office of the late Dr. J. G. Barbor, of Le Roy, and went to California in 1862. We are informed that he was a native of Canada.

The coroner's jury rendered a verdict charging Schroeder with the murder of Dr. Lefevre.

FLETCHER'S DENTAL PORCELAIN.

We have received numerous letters in regard to the change in consistency and appearance of the "paste" of Fletcher's Dental Porcelain. The following note written by Mr. Fletcher in reply to remarks concerning Porcelain Cement Paste will be of interest to dentists using the preparation:

"The difference in appearance of Alumina compounds is frequently so extraordinary to those who are not accustomed to work with them, that it is difficult, without absolute proof, to believe that they can possibly be the same material. If hard crystals form in the paste, it should not be used, as they are difficult to crush with a spatula; and they prevent a uniform mixture being made. If the paste works smoothly, and sets, as specified in the instruction, appearance is not of the slightest consequence; the results are the same. The paste will sometimes change, without the slightest apparent reason, between a thin liquid, a viscid mass, and a solid; and also from dead opaque white to clear; and, *vice versa*, all the forms working equally well and giving precisely the same results. *A paste completely unworkable and apparently spoilt may usually be made good again by simply rubbing with a pestle and mortar.*"

Some dentists suppose that the paste of Fletcher's Dental Porcelain is phosphoric acid only. Mr. Fletcher has experimented with the phosphate of zinc compounds and found that in some acids they dissolve like sugar in water. Consequently phosphate of zinc has never been recommended by Mr. Fletcher as a filling material. The Dental Porcelain paste is, and ever has been made according to the process specified in the patent, *i. e.*, a paste formed by Pyrophosphate of Alumina, with the smallest possible quantity of phosphoric acid which is necessary to make it soluble. The excess of acid is taken up from the paste—when required for use—by the addition of an oxide of zinc. The oxide of zinc used is so excessively dense and hard as to be practically insoluble in weak reagents.

All of the materials used are made under the personal supervision of Mr. Fletcher, and the utmost care and watchfulness is exercised that the finished products may be uniform and reliable, but notwithstanding all this, it is impossible to guard against changes in appearance of the paste, caused by climate and temperature.

THE DENTAL JAIROS states that the Goodyear Dental Vulcanite Co. have already made application for a re-issue of their patent, which expires by limitation in June, 1881. We think the *Dental Jairos* is mistaken. The only way in which the Goodyear Dental Vulcanite Co. can procure an extension of the Cummings patent is by special act of Congress, and we are assured that no such application has yet been presented to the Patent Committees of either the Senate or House of Representatives. We shall endeavor to keep the profession posted as to any move in that direction.

MISCELLANEOUS NOTES.

According to Professor Cazeneuve, of Lyons, phosphorus given to dogs or cats, in toxic doses, increases the proportion of urea in urine, to the extent of tripling it.

Dr. Chalfant, who shot Josiah Bacon some months since in San Francisco, was convicted of murder in the second degree, and sentenced Sept. 20th to 10 years imprisonment.

Two eggs of the extinct great auk were sold by auction in Edinburgh a short time since, both being purchased by Lord Lilford, one at £100, the other at 102 guineas—probably the largest sum ever paid for a single egg, with the exception of that of the moa, a single specimen of which was sold at the same place in 1865 for £200.

The mixture used by Mr. Hannay in the production of his first artificial diamonds consisted of 90 per cent. rectified bone-oil, 10 per cent. paraffin spirits, and 4 grammes of lithium. These substances were placed in a tube 4 inches in diameter, with a bore of $\frac{1}{2}$ an inch, and after the open end had been welded up, the tube was subjected to a red heat for 14 hours.

In connection with the exhibition in October of the Philosophical Society of Glasgow, of apparatus for the utilization of gas and electricity, lectures will be delivered on the following subjects: Lighthouse Illumination, by Stevenson Macadam, F. R. S. E., of Edinburgh; Gas Light in Houses, by Prof. Vernon Harcourt, F. R. S., Oxford; Coal Tar Colors, by C. Greville Williams, F. R. S., London; Gaseous Fuel, by Thomas Fletcher, F. C. S., Warrington.

Ancient Hindoo Wit.—The *Transactions of the Odontological Society of Great Britain* for March contains a photograph of a curious Hindoo bas-relief, representing a group of monkeys engaged in extracting a man's tooth. The unfortunate individual is bound, and the tooth is held in the grasp of a very primitive-looking extracting instrument (resembling somewhat the large claw of a crustacean), to which a small elephant is attached by means of tackles. The piece of sculpture was found in a ruined temple near Allahabad, known as the Stupa of Bharbut, and was more than 2000 years old, the temple having been built about the year 200 B. C.

Spontaneous Generation.—According to *Les Mondes*, Dr. Bastian has again visited Paris in order to try to demonstrate his views with regard to spontaneous generation. Being unable to come to any agreement with Pasteur as to the manner of conducting his experiments, he decided to return to London. But before setting out he described his operation in detail, and Pasteur asked him how he cleansed his retorts. He replied, "By rinsing them with very pure water." Pasteur assured him that there were bacteria even in the purest water, and advised him to repeat his experiments after having heated all the apparatus thoroughly in the fire. Nothing has since been heard of spontaneous generation.

The sunflower promises to become an exceedingly useful plant to the commercial world; for some little time on the Continent, especially in Sweden and Denmark, and in America, oil has been expressed from its seeds and used for lubricating machinery, the manufacture of soaps, and also for domestic purposes. Experiments have lately been tried with it for making cake for cattle feeding, and we are informed that it has proved cheaper and better than linseed for this purpose; oxen, sheep, pigs, pigeons and rabbits fatten rapidly, eat it greedily, and prefer it to any other seed; whilst poultry improve in flesh, and the quantity of eggs obtained from them is much increased by this method of feeding.

An Electric Furnace.—Dr. C. W. Siemens has experimented for some time with an electric furnace for the purpose of melting in considerable quantities highly refractory metals, such as platinum, iridium, and steel. In the small furnace which was exhibited before the Royal Society, the positive electrode, which was made of iron, entered from below the crucible containing the metal to be melted, whereas the negative electrode, which was a rod of carbon, was attached by means of a lever to a solenoid regulator. The crucible was surrounded by charcoal contained in a copper vessel to prevent loss of heat, and so intense was the heat accumulated that in about 20 minutes 2 lb. of broken files were completely melted. The arrangement was such that it may easily be applied on a large scale. Electric fusion has the great advantage of entirely excluding the atmosphere, and consequently the products of combustion from the substance in the crucible.

Glucose from Rags.—The *Revue Industrielle* states that a German manufactory is turning out over a ton a day of glucose made from old linen rags. These rags, which are composed of hard vegetable fibres, are treated with sulphuric acid, which converts them into dextrine. The latter product thus obtained undergoes a washing with milk of lime, and is then treated with a fresh supply of acid stronger than the former, when the mass is at once transformed and crystallizes into glucose, of which "rich" confections and jellies may be made. The process is said to be a very cheap one, and the glucose chemically identical with grape sugar. A strong outcry, however, has arisen against the manufacture of grape sugar from rags, and the enterprise is understood to be in danger of being interfered with by the German Government. The sugar, however, is none the worse for being made of rags, being the very same substance as if it were obtained from fruits.

Classic Dentistry.—Dr. Xavier Landerer, of Athens, sends the following to the *London Chemist and Druggist*: "It may be safely asserted that the ancients certainly cleaned their teeth and used tooth-powder. If the necessary attention were given, relics would be found in the graves of the women. The word *odontotrimma*, the tooth-scouring stuff or tooth-powder, is found in ancient Greek, and in the Greek *Pharmacopœia* is applied to tooth-powder. It is interesting to find that the ancients had made some advance in dentistry. A friend of mine (now dead) occupied himself in collecting ancient Hellenic skulls, wishing to show that they did not differ in shape from those now carried in Greece. Among several hundreds of these skulls, some perhaps 2000

years old, we found two with 'stopped' teeth. One was filled with a mass as hard as stone, which, on analysis, proved to be hydraulic lime, made from volcanic ash, Santorin earth, and lime. Marvellous as it may seem, the hollow of one tooth in the other skull had been filled with gold thread or gold leaf. The metal used was pure. The skull itself, though deprived of the stopping, is now in the Archæological Museum."

Patents Expiring in 1880.—Among the prominent patents expiring this year are the following : For process for manufacturing paper stock from wood, Paul A. Chadbourne, of Williamstown ; for machine for rolling leather, Joel Whitney, of Winchester ; for revolving firearms, Smith & Wesson, of Springfield ; for artificial teeth, Samuel S. White, of Philadelphia ; for harvesting machines, Walter A. Wood, of Hoosick Falls, N. Y. ; for stem-winding watches, Joseph Antoine Jean Redier, of Paris, France ; for wooden cases for lead pencils and for pencil eraser, to Eberhard Faber, of New York ; for improved ordnance, Norman Wiard, of New York ; for piano fortes, to Decker, of New York ; for improved roller skates, Plympton, of New York ; for sewing machines, Elias Howe and Madame Demorest, of New York ; for new process of manufacturing white lead, hydro. filuo. silicic acid, porcelain and glass, Thomas Cooley, of London, Eng. ; for shoe-pegging machine, William G. Budlong, Providence, R. I. ; for printing press, William Bullock, of Pittsburg, Pa. ; for match splints, Beecher, of New Haven, Ct. ; for process of manufacturing paper from wood, for paper linings, for process of pressing flax, for new fabric for insoles of shoes, for process for the manufacture of long staple fibre, for process for manufacture of felt, to Stephen M. Allen, of Woburn, Mass.

BOOK NOTICES.

THE DENTIST. A popular treatise on the care of the Teeth. Second Edition. By O. A. JARVIS, M. D. S. New York : S. W. Green's Son.

This treatise is one of the most important of the recent contributions to popular dentistry, and is written with a clearness which renders its statements intelligible to the unpracticed reader. The author says that he has aimed to present, not the theoretical, professional or scientific, but the purely practical, just what he has to tell to patients in part every day. Dr. Jarvis occupies a high position in the profession, and hence his views are entitled to more than passing consideration.

BOOKS RECEIVED.

CORRESPONDENZ BLATT für Zahnärzte. Berlin : C. Ash & Sons.

LE PROGRES DENTAIRE. Paris : C. Ash & Sons.

GIORNALE DI CORRISPONDENZA PEI DENTISTI. Redatto dal Dott. Alberto Conilliaux. Parma : Publicato da C. Ash e Figlio.

L'ODONTOLOGIA, Luigi Ribolla, Medico-Chirurgo-Dentista ; Palermo.

DENTAL OFFICE AND LABORATORY. Philadelphia : Johnson & Lund.

BUFFALO MEDICAL AND SURGICAL JOURNAL. Buffalo, N. Y.

JOHNSTON'S DENTAL MISCELLANY. Johnston Bros., New York.

ANALES DE LA SOCIEDAD ODONTOLOGICA DE LA HABANA, Havana, Cuba.

THE DENTAL JAIRUS. Sacramento, Cal.

THE DENTAL LUMINARY. Macon, Ga.

THE PHYSICIAN'S AND SURGEON'S INVESTIGATOR. Buffalo, N. Y.

GAZETTE ODONTOLOGIQUE. Journal Officiel de la Société Syndicate des Dentistes. C. V. Delahaye et Cie., Paris.

DENTAL HEADLIGHT. Nashville, Tenn.

DIE ZAHNTECHNISCH REFORM. Gustav H. Pawelz, Berlin.

EL PROGRESO DENTAL DE LA HABANA. Revista Mensual de Cirujia y de Protesis Dentarias, Habana, Cuba.

THE INDEPENDENT PRACTITIONER. Harvey L. Byrd, A. M., M. D., and Basil M. Wilkerson, D. D. S., M. D., editors, Baltimore, Md.

ARTICLES OF ASSOCIATION AND BY-LAWS OF THE BRITISH DENTAL ASSOCIATION.

DENTAL PATENTS.

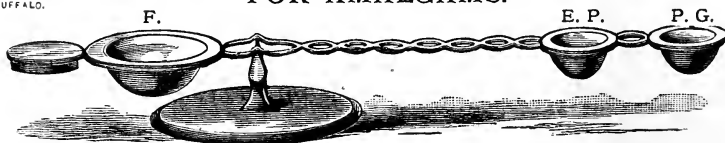
ISSUED FOR THE QUARTER PRECEDING THE DATE OF THIS JOURNAL.

- 9,248—June 8, 1880.—DENTAL PLUGGER.—George B. Snow, Buffalo, N. Y., assignor to the Buffalo Dental Manufacturing Co. (re-issue).
 228,979—June 22, 1880.—DENTIST'S CHAIR.—Elihu Burrill, Elgin, Ill.
 229,227—June 29, 1880.—DENTIST'S CHAIR.—Anthony Abel, New York, N. Y.
 229,614—July 6, 1880.—TREADLE MECHANISM FOR DENTAL ENGINES.—William A. Johnston, Edgewater, N. Y.
 229,645—July 6, 1880.—DENTAL ENGINE.—Eli T. Starr, Philadelphia, Pa.
 229,769—July 6, 1880.—DENTAL PLUGGERS.—Eli T. Starr, Philadelphia, Pa.
 229,809—July 13, 1880.—DENTAL PLUGGERS.—Alexander McG. Denham, Philadelphia, Pa.
 9,287—July 13, 1880.—ELECTRO-MAGNETIC DENTAL PLUGGER.—W. G. A. Bonwill, Philadelphia, Pa. (re-issue).
 231,375—Aug. 17, 1880.—METHOD OF AND APPARATUS FOR MAKING DENTURES.—Robert Telschow, Berlin, Prussia, Germany.
 231,734—Aug. 31, 1880.—DENTAL ENGINE HAND PIECE.—Eli T. Starr, Philadelphia, Pa.
 231,945—Sept. 7, 1880.—HAND PIECE FOR DENTAL ENGINES.—August Weber, New York, N. Y., assignor to George E. Hodge.

FLETCHER'S DIFFERENTIAL BALANCE

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FOR AMALGAMS.



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This new balance for obtaining the proper proportions required of filings and mercury is so simple and precise that it is indispensable where uniformity is desired. The resulting mass is always the same, whatever the nature of the alloy may be.

To use the method weigh with the new differential balance, the proportions required by putting mercury in the cup E. P. for the Extra Plastic Amalgam, or in the cup P. G. for the Platinum and Gold Amalgam, then pour filings into the cup F, until the mercury is balanced.

F.—E. P. gives 3 filings to 1 mercury (Extra Plastic). F.—P. G. gives 4 filings to 1 mercury (Platinum and Gold).

PRICE.—Fletcher's Differential Balance, 75 cents.

BUFFALO DENTAL MANUFACTURING CO.

THE DENTAL ADVERTISER.

VOL. XII.—BUFFALO, N. Y., JANUARY, 1881.—NO. 1.

PATHOLOGY AND THERAPEUTICS: FROM A CONSERVATIVE "NEW DEPARTURE" STANDPOINT.

BY F. E. HOWARD, M. D. S., GENESEO, N. Y.

Read before the 7th and 8th District Dental Societies, October 26, 1880, at Rochester, N. Y.

Pathology, respecting secondary decay, is viewed very differently by many at the present day, from what it was five years ago. Up to about 1875, it was generally supposed that secondary decay about fillings arose from "exactly" the same causes that the original disease was produced, and is identically the same thing,—“via” “decomposition of tooth structure, the result of solvent action of acids, which have been generated by fermentation going on in the mouth;” or the “chemical union of mineral constituents of the tooth, with elements contained in the fluids to which it is exposed;” the result of wanton carelessness, or inability on the part of the patient to maintain absolute cleanness about fillings.

When secondary decay did occur about gold fillings, and it could not be charged to the results just mentioned, it was attributed to “defective manipulation.” Operations were repeated from time to time, and repairs made with the same results, by “this faction” of the profession.

Another class of the profession were not satisfied with this explanation of the cause of secondary decay about fillings, and proceeded to investigate the subject, from *the scientific standpoint*. The result of such investigation has led to the development of new theories, termed the “new departure.” They maintain that secondary decay about fillings may be, in many cases, the result of incompatibility between filling and

tooth bone. The result of conductivity of fillings. And that the successful treatment of many cases require a physiological change in the organ, or therapeutic and antiseptic treatment, not "recognized" prior to these investigations. They claim that at certain stages of decay, a metallic filling (we will take "gold," as this is the best conductor,) promotes decay, and in many cases it is the *prime agent in provoking it*. This is the view we are compelled to accept, from a careful, practical observation, in every day practice.

When this is manifest, it is shown in that class of poorly calcified teeth, and in those of young subjects, where the "aqueous" or vital element is in excess of the mineral constituent. If these teeth are filled with gutta-percha or any non-conducting material, though the fillings may soon be worn away by attrition, the decay is absolutely stopped so long as the material remains in a position to protect the walls of the cavity from external causes of decay; such as preventing the ingress of particles of food, and foreign substances in general, even though "dampness" pervade the whole *cavity underneath the filling*. And there are few cases where gutta-percha fillings are water tight. In this class of fillings though often imperfectly done, decay in the very poorest quality of teeth is effectually arrested.

Why so? "Because the aqueous element of the tooth, being of the same nature as the solid constituent, has no power to act upon the latter, and cannot cause decay, or dissolution, until the equilibrium is disturbed." "Decay only takes place, when the external fluid is rendered chemically different by confinement in fissures, pits, or cavities, and is thus changed from the other fluids, to which other surfaces of the teeth are exposed." The non-conducting filling being in harmony with the tooth, the aqueous element remains neutral or becomes neutral by contact with this vital fluid. This is the case with leaky non-conducting fillings, consequently there is nothing to excite chemical action. The decay is arrested by external excitants being shut out, such as thermal changes, electrical currents, and decomposing fluids, and nature goes on unmolested in the work of more perfect calcification of the organ.

This, together with the usual antiseptic and disinfectant remedies, is the topical, therapeutic treatment that such cases require. And yet, this is not the course that is best to pursue in all cases. It is often advisable to use a material that is antagonistic and incompatible with the tooth structure. Under these circumstances we must anticipate future decay, and make calculations accordingly with the idea of refilling, or repairing, at no distant future. Because if we fill these poor, soft, or imperfectly calcified teeth with gold, we must depend upon it, the aqueous element, natural to this class of teeth, is a condition that is liable under many circumstances to work mischief, despite all efforts on our part, not excepting those of even a few of the best operators we have.

In this we mean to show that we have an element to contend with, that mere mechanical means will not overcome. Gold is not a "panacea" for all conditions of decay of the teeth, any more than some "patent medicines" are for all ills that flesh is heir to. For an example, we will take gold, and fill this class of teeth in such localities as proximate, and labial surfaces, and the filling will often exert a deleterious condition. There is a certain class of teeth that we have to operate on, that we find affected by decay—sometimes it might be termed erosion more properly—where the lime salts are dissolved out at a line ascribed by the gum, white opaque patches are presented that can often be removed with the thumb nail, being so soft, and chalky, caused by the dissolution of earthy matter occasioned by acid secretions. Now we must admit, that if we prepare a cavity of this sort, and fill with gold, the margins about the fillings seem to fairly melt away, like snow beneath the noon-day's sun. This is not always the result of imperfect manipulation; if these fillings are absolutely water-tight in themselves, the result may be the same. Often there is so much of this aqueous element in the organ, that it is impossible to dispose of moisture about the fillings for any great length of time, no matter how skillfully the operation may have been performed. For in this class of teeth there seems to be, under some circumstances, a *retrograde action*, that "supercedes" the topical therapeutic treatment, that may have been applied to the cavity before filling.

And this is one thing that the opponents of this theory have lost sight of, or would not look at squarely in the face, but hang their faith on this peg: that if there is no leakage about a gold filling there can be no electrical action; and if our fillings, are water-tight, so as to perfectly exclude external moisture, we have accomplished all that is necessary for success. A few have recognized this in a measure, but claim where this aqueous condition is manifest, it is confined to the dentinal tubuli, and not so with the enamel—the latter being of such a dense structure it is devoid of this aqueous element entirely. And that if a filling at the margins be perfectly water-tight, the moisture from the dentinal tubuli will be inert to act deleteriously upon the tooth—for no electric current can be established.

But this is an error, and not the case at all. For it has been shown conclusively by Dr. Abbott, (and I think others,) that "the enamel is not a crystal but a living tissue, endowed with the same vital element as dentine, only to a less degree." Now that this is an established fact, it is our conviction that a filling often becomes a battery, in many cases, where the operation is "absolutely perfect." And the result is electro-chemical decomposition about the margins of fillings, in spite of our best efforts.

Doubtless many of you have seen discoloration about fillings made with "crystal gold" some years ago, of a bluish character, that is generally pronounced "leakage." In fact this gold was discarded by many,

because of the discoloration that often followed its use. In many cases, this was not the result of faulty operations. I have seen many of these fillings, inserted by an Eastern gentleman of acknowledged ability, whose operations with gold are perfection. About many of these fillings there was a "blueness" which was proof positive of chemical action. The acid used in the preparation of this gold, had left its mark. *The iron had entered the tubuli, and the aqueous element in the tooth was fuel sufficient to feed this chemical fire.* In such conditions, with soft teeth time generally pronounces the verdict of failure. With well calcified ones, the power of resistance to such impressions may prove a success.

When we think of the recognized make up of the different classes of teeth and hear the claim made, that gold is the best filling for all teeth, or as good as any, if properly manipulated, it reminds me of something that has been said by Dr. S. B. Palmer on this subject, and it goes to show how absurd it would be to apply this principle of *gold in all cases*, to other matters outside of the mouth, where *judgment should govern our operations.* He says: "In case of repairing a leaky cistern, wisdom would demand knowledge of the material of which the cistern is composed, and the nature of the repair necessary. Then call a carpenter, plumber, or mason to make the repair. A porous cement cistern would not be benefited by the carpenter or plumber, only by a mason, and the application of a chemical to fill the pores over the entire surface." * * * * *

And in this class of teeth mere mechanical manipulation of a material that is indestructible in itself, cannot be made subservient to meet the requirements of all cases.

Dr. Flagg uses no gold in his own practice at the present day. Yet this is not the teaching of the new theory. He says, "that the 'New Departure' concedes the use of gold as a filling material whenever! and wherever!! it can be used for the preservation of teeth as successfully as other materials. The new departure begins where gold leaves off, to help gold if need be, to sustain its exalted reputation, and to furnish a substitute in other materials, in cases *where gold is inadmissible.*"

And he remarked at the outset in presenting his paper to the Odontological Society, New York, in 1877, which excited so much discussion and comment: "I do not want to say anything to you of the teeth which you are in the habit of filling successfully, and as we express it, satisfactorily with gold—teeth of dense structure, whose cavities have walls so strong that you can impact a filling which lasts a life-time. But I do ask, that you will gradually discontinue this packing of gold into teeth that are so poor, so frail, so unsubstantial, that it is, to say the least, doubtful whether the result will be creditable to your profession, or satisfactory to your patient."

This is the point I wish to make. And it must be admitted by any intelligent, unbiased dentist, that many of the non-conducting fillings that we have at our command, meet the requirements of such teeth better, though the filling may be short-lived in itself. But it is really the topical therapeutic treatment, that such cases often demand.

Who is there, that has practiced for some years, that has not groups of gold fillings on labial surfaces, one adjoining another, put in at different times; or removed and renewed the whole operation, from time to time? We do not denounce the practice; often we are compelled to choose the least of two evils. If the subject cannot have the case renewed from time to time, when the plastics are used up, (for in such localities, gutta-percha, oxychlorides, and the like, are soon worn down by friction and attrition. I trust we have something better in the "Oxy-phosphates." The latter I have experimented with for two (2) years very satisfactorily. But this is scarcely time enough to determine its durability, and in what class of mouths, and what condition of the secretion, they will do the best service. And when this class of plastic fillings are not admissible in our judgment, according to the varied circumstances that may be presented,) we must do the next best thing, which would be to devote much more time in the operation, and increase the expense of a gold filling, often at the *expense of the vital organization of the tooth*, instead of having that soothing, antiseptic and therapeutic condition imparted to the organ, by the non-conducting fillings. The latter assists nature in the work of perfect development; while the former "sometimes" retards this progress, for under chemical excitement, she cannot perform this office.

I recognize gold as superior to all other material in general that we have at our command, if skillfully manipulated. But it must be used with judgment, in its proper place. We must *acknowledge its conductivity, consequently its inadaptability to meet the requirements of all cases.*

The therapeutic effects of English precipitated chalk and lime water, would do much to stay the progress of decay in this class of teeth, by counteracting the acid condition of the secretion usually manifested in such cases. A hygienic diet with young subjects, would work a great change. But what can we effect in respect to hygiene? But little. People will eat what their appetites crave, if it is at the expense of teeth. The good advice that we may be inclined to give on this subject, will not be heeded by many. The topical treatment, conducted by the dentist, is about all that will effect much, aside from the beneficial results of ordinary cleaning. This, most all will do.

We must depend upon our own exertions; success is only accomplished by good judgment on our part, and a thorough knowledge of the requirements that each case demands.

The application of such remedies as carbolic acid, creosote, theymal, oxide of tin, and varnish, will effect much toward making perfect operations in gold a success. By the affinity of the tooth element, for remedies applied, the tubuli is sealed up in a measure and the aqueous element disposed of in a degree. Our object should be to prevent chemical action, by the application of such remedies as tend very much to dispose of the aqueous element. If this is accomplished, and gold operations are absolutely first-class, our efforts are generally crowned with success. If we do not succeed in controlling chemical action, non-conducting fillings will usually best meet the requirements. This precaution would often make a successful operation in gold that would otherwise prove a failure. In fact, the application of carbolic acid, or creosote, should never be omitted. For it disinfects the cavity, thereby acts as an antiseptic, obviates sensitiveness, lessens thermal shocks, and imparts general comfort and satisfaction to the patient.

When cavities are deep, it is usually best to line such with some non-conducting material, as a decided benefit will be derived from such a practice. It is plainly shown that a tooth affected with caries does not remain passive and inert to impressions of decay; but, on the contrary, great efforts are made by nature to protect pulps from exposure and from carious influences. And the half decomposed calcarious condition of caries in cavities, or superficially located, is often transformed into a hard and bony-like consistency. A condition that further decay makes but slow progress in. Now this is the natural work of nature; it may be assisted, or retarded. Irritation will produce either.

A gutta-percha filling will be neutral, and allow nature to go on with her work uninterrupted in calcification of the fibrili.

An oxy-chloride filling will stimulate the pulp to an active condition, if rightly applied. If too strong, the hydro-chloride, an element that the material possesses, may inflame the pulp, and death of the organ may ensue.

An oxidized tin filling prevents galvanic action, an antiseptic condition is established, leaving the walls of the cavity in the most favorable state to resist decay.

Dr. S. B. Palmer tells us how amalgam fillings preserve the teeth. He says, "Amalgam at first acts in the same manner as gold—though in a less degree, because it is not so good a conductor. But later the poor amalgam becomes itself oxidized, and the current is then lessened. Also the metallic coloring matter thrown off by oxidation, is received into the softened bone, until the once positive element, becomes neutral."

Thus decay is held in check. A gold filling does not oxidize, and can not hold decay in check, like tin and amalgam, and as often manipulated

and inserted, irritates the vital condition so that decomposition and disintegration is promoted. How so? The gold filling becomes, under some circumstances, an agent of circulation. It promotes chemical action, it excites or increases this by establishing a galvanic current, which acidifies saliva, and then aids in producing an agent like acid, which irritates the vital organization of the tooth, causing it to break down at the margin of the filling. Then we have a condition established, that we term electrochemical decomposition. This same condition of things in "well calcified teeth" would not be likely to make any impression upon the organ in this direction.

Thus it is, that a gold filling, in certain locations, and in well calcified teeth, may last forty (40) years; where one, equally good, or better, in another class of teeth, might not last forty weeks.

The "new departure trio," Drs. Palmer, Flagg and Chase, have developed these principles. They have been recognized as existing by many, for years. They have demonstrated plainly, to my mind, the cause and effect of this theory. In practical observation I have seen its working. It has better fitted me to accept the situation, and prepared me to battle with the enemy. It has shown me the remedy for this and that case. It has given me instructions how to master the elements of decay, upon scientific principles, instead of merely mechanical means.

These men are benefactors. They have put at the disposal of the profession those principles with which to hold in check this destructive element. It is not going to revolutionize operative dentistry, by causing men to discard gold, and stuff cavities with plastics. The "new departure" does not advise anything of the kind. It should not be assailed on the ground that it is degrading, and will lower the standard of dentistry. Gentlemen, it is the reverse. The proposition of my esteemed friend, Dr. Flagg is: *That you enlarge the field of usefulness and the work of conservation of the teeth.*

He says: "Make a beginning with the tooth that you would ordinarily extract, and treat them. Make 'that' dentistry. Fill these with plastic fillings. It is from a desire that the forceps be laid aside that this advice is given." (Mark it.) "It is from a desire that our patients shall eat upon teeth, the roots of which are in their jaw. It is from a desire that they shall be exempt from the infliction of artificial work. It is from a desire to extend the blessings which the hand of our profession holds to bestow. It is that we may be sought, rather than avoided; that we may be extolled, rather than decried; that we may be esteemed, rather than censured; that rather than be feared, we may be loved and respected."

A CRITICISM ON THE NEW DEPARTURE.

AMERICAN DENTAL ASSOCIATION, 20TH SESSION.

Dr. J. R. Patrick, of Belleville, Ill., forwarded a paper to the above meeting, which was read by the secretary, and amongst other matters, contained the following :

"When an individual, either by bad counsel or a false economy, has been subjected to mercurial or amalgam treatment for diseased teeth, we find that fifty parts of the mercury out of the sixty used in forming the amalgam is vaporized by the heat of the body in a few years and taken into the system in small but regular quantities—the most potent manner of administering mercury for constitutional effect. Should not this be sufficient to induce every conscientious practitioner to discard all amalgams from the list of filling material, and be the means of inducing others to be less presumptuous in their speculations, and more honorable and resolute in their practice?"

Save us from our friends! If Dr. Patrick knew *anything* about this subject, he would know that there is not and never was, except in the imagination of the ignorant, the smallest atom of truth in his statement. Such champions for gold plugs simply bring ridicule on their own cause, and Dr. Patrick cannot bring the smallest proof to back his statements.

To test the question of evaporation of mercury from plugs, I made twelve each of 200 grains weight, of different alloys, varying in proportions from 10 per cent. to 80 per cent. of mercury. These plugs I placed in the main steam pipe leading from the boiler to our steam engine, which was running on an average 14 hours daily—the whole of the steam used passing over the plugs. At the end of one month four of the plugs were removed. One was partially fused and the weights were respectively, 200.00, 200.05, 200.10, 200.40 grains. There was *no loss, but an increase* in weight from surface oxydation. At the end of three months the remainder of the plugs were removed and all showed a trace of increase in weight from the same cause.

I pray Dr. Patrick to digest the above, and in future to make statements which he is in a position to prove, if he wishes his statements to have any value.

THOS. FLETCHER, F. C. S.

WARRINGTON, ENGLAND.

IN THE CASE OF E. F. Schroeder, exchange teller in the London and San Francisco Bank, for the killing of Dr. Alfred Lefevre in the latter's office, at Oakland, California, last July, the jury, on December 13th, after being out seventy-two hours, returned a verdict of not guilty. The tragedy, it will be remembered, was fully reported in the October number of the *Dental Advertiser*.

MECHANICAL DENTISTRY.

BY E. M. FLAGG, D. D. S., NEW YORK.

Read before the Connecticut Valley Dental Society.

It has become to-day a very important question for our profession to decide, whether celluloid is to be a failure or a success as a dental plate. Of late there has existed a strong disposition on the part of many members of the profession to evade the subject of artificial dentistry, or ignore it entirely. Its discussion has been more or less excluded from dental associations, and in some cases motions have been made to deny it a position altogether as a branch of dentistry. One might almost suppose, to hear certain gentlemen speak of artificial dentistry in the manner they do, that they had so far outgrown it, and it had become a matter so simple and all its requirements had been so completely fulfilled, that mental energy bestowed in that direction was a mere waste of brain-power. I claim the contrary. Its requirements have not been fulfilled. An artificial denture is supposed to represent the natural organs in a manner that its expression, character and effect will harmonize with the individual for whom it is made. In other words, that it will be an exact portrait of what the patient's teeth would have been had he preserved them in health to the time when the artificial substitute was inserted. There are many gentlemen in the profession who are wearing artificial dentures, and judged by the test just named there is not one denture in ten but that could be picked to pieces by perfectly legitimate criticism. So much for the requirements of artificial dentistry having been fulfilled. Remarks in this direction might be continued indefinitely.

The necessity for a higher standard of artistic culture in this direction cannot be ignored. It is useless to prate about the number of teeth that are being saved annually. That does not help those who have lost their teeth one particle, and we all know it is no uncommon remark on the part of patients, that it is impossible to make a set of artificial teeth look natural. So far as rubber is concerned this remark is true. You cannot get individuality from a row of moulded porcelain blocks. As well might you expect an artist to make a portrait by selecting from a quantity of manufactured noses, eyes, ears, etc., and joining them together on a canvas. To obtain individuality in work the artist must not be restricted in his ability to arrange any portion of the material which he uses in any manner that he may desire. He may take a single plain tooth and carve and polish it to any form he desires, provided the material be sufficient; but a moulded block, as it comes from the manufacturer, cannot be made by any amount of artistic manipulation to alter its rigid, lifeless expression. So far is this assertion true, that I have had agents of dental depots tell

me that they could always detect whether the wares exhibited in the mouths of those they met while traveling were from the moulds manufactured by the house they represented or not. What a comment to be made in a country where our profession is supposed by some to have reached the highest plane of development !

Celluloid has not this defect named in connection with rubber. Single, plain teeth can be used, and the artist is not restricted in giving the highest expression and character to his work. If he appreciates the requirements of his case there is nothing to prevent him from fulfilling them if he uses celluloid ; so I say again, that there is no question so important for the profession to decide as whether celluloid is to be a success or a failure. The defects found to accompany the use of celluloid are as follows : (1) A warping of material either in the process of moulding the plate or soon after the plate is inserted. (2) Discoloration of the material around the necks of the teeth, soon to be followed by discoloration of the entire plate and consequent softening of the plate. (3) After sufficient softening, the plate itself often breaks, which breakage is assisted by the disposition of the material to warp, and the teeth are inclined to drop off by the celluloid shrinking from the pins and the softening of the material around the pins.

The plate at first intrudes itself upon the notice of the patient by a constant taste of camphor in the mouth, and to some patients this effect is very dispiriting, but as the plate becomes discolored and softened, the taste and smell of the celluloid is disgusting in the extreme, and the patient is inclined to condemn a material whose sole defect may lie in the manner in which it is worked. If we go on working it in the manner which we have been taught, celluloid is to be a failure, because there has been no apparatus that will fulfill the conditions required to the production of a perfect plate.

These conditions are as follows : (1) No steam, oil, or other foreign substance must be allowed to come in contact with the material while it is plastic, or it will discolor. (2) During the process of pressing the celluloid, one portion of the blank must not be one degree colder than another portion, or it will warp. (3) The material must have its form changed at a heat much higher than is now used, otherwise it will still have a tendency to return to its original position, or, in other words, warp. This superior heat must be obtained in an apparatus that is air-tight, for, if the superheated material can obtain oxygen either in the form of vapor or a current of air, it will surely burn.

Let us now briefly consider the various apparatus that have been used for working celluloid and we shall see how unfit they are for producing a perfect plate, or if capable of producing good results, we shall see how the labor required will render them impracticable to the mass of the profession.

First, we have the glycerine machine, that produces a plate in which the celluloid had the benefit of a good soaking in this greasy, penetrating compound while the celluloid was in a softened condition, and the pins of the teeth had the additional advantage of being well greased, which left them in a condition admirably adapted to facilitate their future exit from the plate.

In the second place, we have the steam machine, with no thermometer, and a valve in the place of it. Our experience with this instrument was that it produced a plate whose texture was not in any way improved by a volume of overheated steam rushing through it while in a plastic condition, and the contact between tooth and plate was anything but perfect. The plaster cast was often softened to such a degree by the hot steam and water that the fit of the plate would be destroyed. The investment would also soften to such an extent that the articulation would be badly impaired. The plunger, running in a steam-packed cylinder, always left us doubtful as to whether the plate or the rubber of the cylinder was making resistance to our pressure, while such a thing as getting a fine dense texture to our celluloid was entirely out of the question. In fact, to enumerate all the defects of this instrument (so much vaunted by the Celluloid Company) would require more space than can be allowed to this entire article.

Another machine had a limited sale and was known as the Heintzmann dry oven. It purported to press celluloid at a dry heat, and was furnished with a large door, the opening of which served the double purpose of allowing the flask to be seen and the cold air at the same time to enter the flask. It also enabled the operator to get one part of his flask very hot while the other remained comparatively cold, and it was with the greatest ease that he could burn one corner of his plate while the other remained so cold that the material would hardly flow. These bad results would be in part due to the misleading influence of a thermometer that was placed on the top of the machine, which could only register the heat of the iron walls of the heater, and as the burner heated the iron walls and the flask was the last thing to receive heat, the thermometer was therefore of little use.

The fourth machine is known as the "Best," and although far better results could be obtained with this instrument than any of the others we have mentioned, there is probably no other machine that produced so many failures. "Dry, moist air" was not so bad as superheated steam for the texture of a celluloid plate; but any moisture is bad coming in contact with celluloid in a plastic state. It prevents elimination of whatever is volatile in the material, so that the material does not attain a good degree of hardness and cuts under the instrument in a manner known as cheesy. Perfect dryness of the flask is eminently desirable, and this can-

not be satisfactorily obtained where there is any unevenness in the application of heat to the flask. Unless the heat is perfectly uniform the plaster is liable to powder and to crack, and becomes unfit for an investment.

In the Best machine, by constant watching and shifting the upper for the lower half of the flask continually, so that they would be alternately presented to the bottom of the oven, we might obtain a comparatively even heat. The directions said, "Wet the finger and touch the heated flask, as a laundress does a flat-iron, in order to see to what extent it would 'fizz.'" This primitive operation was supposed to serve the place of a thermometer and indicate the heat of the flask, but I have to record it as my experience that it was a very unreliable "thermometer," and I doubt that if all evidence could be collected upon the subject of "finger fizzing" (or flask fizzing), it would lead to results sufficiently certain to warrant its use in the working of a substance so sensitive as celluloid is.

So much for the apparatus heretofore used; and if celluloid were dependent for its success upon the machines mentioned, we should not have long to wait before it would be generally given up as a failure. A few men of the profession who could give their labor to celluloid as a specialty would have more or less success, but the mass of the profession in the smaller cities, who have to divide up their time between both branches of our specialty, would not and could not afford to give their attention to a material whose best results were attended with uncertainty. For the most part they do not get large fees for work, and failure is with them a very serious consideration. They cannot afford to calculate upon making over plates again. The manufacturers cannot afford to bestow the same expense in the perfection of the "blanks" if their sale is to be narrowed down to a few specialists. Celluloid, as a material, has every advantage that can be hoped for. "Rubber" is known to be unfit for contact with the mucous membrane of the mouth, and "rubber poisoning" is familiar to nearly every dentist. Those who use rubber are victims to a restrictive monopoly. And yet there are probably fifty rubber plates made to one celluloid, and this proportion in favor of rubber will be greatly increased when the license tax upon it is removed.

I have said that celluloid, as a material, is the best that can be used in the mouth, and we will now describe an experiment to prove the truth of the assertion. Take a celluloid blank from the dental depot, say number six and a half full upper (this number covers as much surface as any), pour plaster inside of it, making a model for the blank to rest upon. The blank will fit the plaster model, with the exception of the slight difference to be expected from the "setting" of the plaster. Now, if we keep the blank and the plaster model for six months or a year there will be no change in the fit. The Celluloid Company have not boiled the blank in

grease or glycerine. They have not subjected it to a current of super-heated steam, nor have they cooked it in an oven that would heat one part of it more than another. We may take the same blank and put it to soak in the promiscuous contents of our saliva-pump, and there it may soak for six months at a temperature of 100° F. with no change to either color or form. We will now take another blank and mould it in the steam heater upon a plaster cast. We will not put any teeth on it. As our plaster cast will be probably destroyed in the process of pressing, we shall have to make another one to preserve for the purpose of our experiment. The first effect we note is that our steam-moulded plate will smell strongly of camphor and cut under the instrument in somewhat the manner of hard cheese. In about three days the smell of camphor will have left the piece, and while we congratulate ourselves on that effect there will be another effect upon which we cannot congratulate ourselves, and that is that the steam-moulded piece of celluloid will not fit the cast at all. So much for the effect of steam upon the fit. If we now take our steam-moulded piece of celluloid and put it to soak in the contents of the saliva-pump, we shall find that in one week it will begin to discolor, and in a month will present an appearance as disagreeable as bowspring rubber.—*Dental Miscellany.*

“TRY OUR GUINEA JAW.”

[SEE ADVERTISEMENTS IN THE DAILY PRESS.]

I'm a harmless British householder,
 I pays my rates and taxes,
 And when the school-board precept comes,
 I questions never axes.
 But I says this : 'Tis scandalous
 That our elastic law,
 Should let a fellow advertise :
 “Come try our guinea jaw.”

Look here. I had the meekest wife,
 A sort of she-male Moses,
 Quite diff'rent from that long-tongued wench,
 Who Brown with logic poses ;
 When, dash it, if she did'nt spy
 Upon some Dentist's door
 An invitation to come in,
 And “try our guinea jaw.”

I've never know'd a hour's peace
 Since she began her jaw'ring,
 Except when she's asleep, and then,
 She takes it out in snoring.

As for grub, 'tis quite impossible
 To satisfy her maw,
 Since she has learnt the science of
 That awful "guinea jaw."

Well, sir, I hopes our Parliament
 Won't spy that chap's placard,
 Or else with legislation it
 Will go uncommon hard.
 As 'tis, they're like a flock of rooks,
 With lots too much of caw,
 But what they'd come to, you'll believe,
 With that their "guinea jaw!"

I calls it wicked—that I does—
 To set a noxious trap
 Against a woman's quiet tongue,
 And make it snarl and snap.
 Them Dentists is a nuisance, so
 Suppose we pass a law
 To keep for their own wives and brats
 That precious "guinea jaw."

WILLIAM HARDSTONE.

[The correspondent who sent us this poem (?) omitted to state the source from which it was obtained.—*British Journal of Dental Science.*]

A SENSATIONAL STORY.

The romancing tendencies of the paper in which the following paragraph appeared are so well known, says the *British Journal of Dental Science*, that we feel scarcely called upon to express our entire disbelief in so improbable a story, but if any of our readers should happen to meet with a correct statement of the case, a comparison of the two versions might possibly be of interest:

"A well-known Viennese dentist has got into sad trouble through his ungovernable passion for experiment. Some time ago he made the acquaintance of a young lady, the aspect of whose teeth inspired him with a vehement desire to improve his assistant's acquaintance with practical dental surgery by giving the latter an opportunity to extract a few of them. He therefore persuaded the young lady in question to undergo a 'brief and painless' operation, on the ground that her otherwise irreproachable beauty was marred by certain defective teeth, which he proposed not only to remove, but to replace gratuitously by artificial ones of conspicuous whiteness and brilliancy. Having obtained her consent to this arrangement, he administered laughing gas to her, and whilst she was under the influence of that anæsthetic, his assistant, with admirable skill

and promptitude, drew sixteen of her teeth. When she recovered her senses she was somewhat startled by the unexpected extent of her losses ; but, being a sensible girl, forbore wasting regrets upon the irreparable, and limited the expression of her feelings to a civil demand for the promised new teeth. These, however, upon reflection, the dentist declined to supply, observing that 'she might be very well satisfied with having had so many teeth extracted for nothing.' The patient failing to apprehend the justice of this rejoinder has brought her plaint before the competent authorities ; and an Austrian tribunal will ere long be called upon to decide whether or not a surgeon-dentist be justified in emptying an unconscious maiden's mouth of its teeth in the interest of science and for the instruction of his assistant."—*London Daily Telegraph, October 21st.*

IN THE OCTOBER issue of the *Dental Advertiser*, we mentioned a rumor that the Goodyear Dental Vulcanite Co. had already made application for a re-issue of the Cummings patent which expires by limitation in June, 1881, and stated that "the only way in which the Goodyear Dental Vulcanite Co. can procure an extension of the Cummings patent is by special act of Congress, and we are assured that no such application has yet been presented to the Patent Committees of either the Senate or House of Representatives." We have just received advices from Washington, stating that as yet there has been no *open* move on the part of the Company to have the Cummings patent extended by act of Congress. It is, however, anticipated that the Company will make such effort at this or the next session of Congress.

MISCELLANEOUS NOTES.

Zulu Enemata.—The Zulus, in giving an enema, place the patient on his head and insert into his rectum the small end of a cow's horn. Into this two pints of water are poured.—*Druggists' Circular.*

The decision of the Supreme Court of the United States, on December 1st, in the case of the Goodyear Dental Vulcanite Company, appellant, vs. Charles G. Davis, settles a question which has been the subject of much litigation. The opinion decides that the use of celluloid for dental plates is not an infringement of the Cummings patent and therefore the appellant can collect no royalty or license for its use.

Porro's Operation Successfully Performed.—Dr. Elliott Richardson, of Philadelphia, recently performed Porro's operation successfully (not the operation of Cæsarean section, as reported in the daily papers), the mother being a well-known dwarf, only forty-two inches in height and thirty-two years of age. This is the first successful operation of the kind which has ever been performed by an English-speaking surgeon. Her father was a dwarf, about the same size as herself, while her mother, who died when she was a baby, was a woman of ordinary size. About nine months ago she married William Burnell, a negro minstrel. Mr. Burnell is not a dwarf, but a full-grown man.

The Charters of the Philadelphia Bogus Medical Colleges Annulled.—On Sept. 30th the charters of the Eclectic Medical College and of the American University of Medicine were annulled by the courts. This was done with the consent of Dean Buchanan, who has given up the fight. By Buchanan's own confession, over 40,000 bogus diplomas had been issued from the two institutions. Buchanan was sentenced, Dec. 6, to ten months in prison and \$500 fine. A pal named Chapman was sentenced to the same fine and a year and ten months in prison. Evidently Buchanan's sentence is too light for his offense, but there are probably other indictments against him.

The remarkable suits brought by Mrs. S. Stover, a Boston lady, against Drs. Catlin and Elmendorf of Brooklyn for \$100,000 for alleged malpractice in treating an injury to her hip by a fall, have a remarkable sequel in the fact that an Italian peasant woman, Regina Dal Cin, famous for her wonderful cures, now residing in Brooklyn, has decided that the injury was not a fracture, but a dislocation, and has restored the use of the limb to Mrs. Stover. The marvelous cures effected by this uneducated doctress have been at different times published by the press of the whole country. She was brought to America by Gen. Stewart L. Woodford, who became acquainted with her wonderful gifts while traveling abroad.

Peculiar Obstruction of Wharton's Duct.—Prof. Richet drew the attention of his class at a recent clinical lecture to a peculiar case of a young man, who, while eating some bread, was suddenly seized with a sharp pain in his tongue, which became so swollen that he could hardly speak. It was supposed that there was a foreign body in Wharton's duct; but it could not be discovered until a few days after, when the patient himself felt a sharp point with his tongue. Nothing, however, could be seen; but soon after a small fragment of straw became dislodged from the duct, and the pain disappeared. He had probably eaten a piece of bread which contained the minute piece of straw.—*Gaz. des Hôp., in London Specialist.*

A Colossal Prescription.—A French medical journal tells the following story: A practitioner, sent for from Châlons to a neighboring commune, forgot his memorandum-book, and, having seen his patient, asked for a pencil and a piece of paper in order to write a prescription. It seems that, this village not having partaken of the benefits of compulsory education, these articles were long in being sought for. The doctor, tired of waiting, wrote his prescription on the door of a barn with some charcoal, and left. The relatives of the patient, being puzzled with his writing (which is perhaps not surprising), conceived the happy idea of unhinging the door and sending it to the *pharmacien*. There it duly arrived in a cart, and the prescription, having been perused from the pavement, was duly dispensed.

The Philadelphia Dental College has established, in connection with its dental department, a Hospital of Oral Surgery, in order that its students may be instructed in the surgery of the mouth, as well as in mere mechanical dentistry. A clinic is held, under the charge of Dr. Jos. E. Garretson, Professor of Anatomy and Surgery, and the patients operated upon are kept in the wards of the hospital until able to return to their homes. This is a decided advance in the training of dental students, who, heretofore, have often been deficient in sound medical and surgical knowledge of the mouth and associate parts. There is also connected with the college an anatomical department, where every student may receive instruction in practical anatomy and dissection. The anatomical rooms are under the care of Dr. John B. Roberts.—*Specialist and Intelligencer.*

Human Blood in Parasites.—Dr. Charles O. Curtman, of St. Louis, has been investigating the blood found in the bodies of mosquitoes and bedbugs, and asserts, in the *Medical Herald*, November, 1880, that in all cases of the former, up to forty-eight hours after a meal, a large proportion of human blood corpuscles were unchanged and

readily recognizable. The size and color of mosquito blood are very different from human. As the result of more than one hundred careful measurements, he gives the following sizes : human blood (after imbibition by the mosquito) averages, in dilute glycerine, 1-3200 inch ; in 80 per cent. alcohol, 1-4000 inch. Mosquito blood averages, in dilute glycerine, 1-14000 inch ; in 80 per cent. alcohol, 1-18000 inch. Later experiments prove that bedbugs digest human blood far more readily than the mosquito ; after twelve hours no trace of human blood being discovered.

BOOK NOTICES.

A PRACTICAL TREATISE ON MECHANICAL DENTISTRY. By JOSEPH RICHARDSON, D. D. S., M. D. Third Edition, revised and enlarged, with one hundred and eighty-five illustrations. Philadelphia : Lindsay & Blakiston, 1880. For sale by Buffalo Dental Manufacturing Co.

This popular text-book has been subjected to a careful and thorough revision, and is now, as nearly as it is possible to make it, a complete and reliable exposition of the advanced experience of the profession in matters pertaining to the much neglected department of mechanical dentistry. A great deal of obsolete matter has been eliminated to make place for that suggested by recent discoveries and practice. Nearly every chapter has received a judicious revision ; many new chapters on old subjects and several new chapters on new subjects have been added. We notice an additional chapter relating to celluloid ; a new chapter entitled "Gold Alloy Cast Base ;" a chapter on porcelain teeth in connection with carved block work ; a separate chapter is given to a method of attaching teeth to a metallic plate base, by means of rubber or celluloid ; and a chapter on the very important process of pivoting artificial crowns, &c., &c.

No progressive dentist can afford to be without this revised edition. The work is finely printed and profusely illustrated.

THE YOUNG CHEMIST. A book of Laboratory work for beginners. By JOHN H. APPLETON, A. M., Professor of Chemistry in Brown University. Second Edition. Philadelphia, Pa. : Cowperthwait & Co. For sale by Buffalo Dental Manufacturing Co.

The purpose of this little book is to aid in the instruction of pupils in chemistry, be they old or young, and the method employed is the experimental or object method. To make chemistry interesting, beginners should be allowed to perform experiments themselves, thereby grasping the facts and principles of this science with greater facility. Chemical apparatus, such as is required by this book, can be had at a very low price ; and as the experiments described are in clear and simple language, the pupil can hardly fail to perform them successfully, even without the aid of a teacher. The book is beautifully printed and fully illustrated throughout.

THE SKIN IN HEALTH AND DISEASE. By L. DUNCAN BULKLEY, M. D., of New York. SCHOOL AND INDUSTRIAL HYGIENE. By D. F. LINCOLN, M. D., of Boston, Mass. Philadelphia : Presley Blakiston. For sale by Buffalo Dental Manufacturing Co.

These are Nos. X. and XII. of the invaluable "American Health Primers." We have had occasion the past year to refer to other numbers of this series in complimentary terms, and in doing so, have not been actuated by any desire to please the publishers or flatter the authors. It is our honest conviction that they are the best health series ever published ; there is not an indifferent number among them, and if those who have children in their house and value their health education and happiness will place the whole series within reach of the little ones, they will have the satisfaction of having conferred an incalculable benefit.

THE SPECIALIST AND INTELLIGENCER. A Monthly Journal of Medical Science. Devoted specially to the publication of original and selected articles on diseases of the eye, ear, throat and skin, venereal diseases, etc., including reports of societies, home and foreign news, and other information connected with these specialties, and to a complete record of medical literature, book reviews and criticisms. Edited by CHARLES W. DULLES, M. D. Presley Blakiston, publisher, 1012 Walnut Street, Philadelphia, Pa. Price, \$1.50 per annum.

Of all the journals that come to us, this is the most practical and interesting. There is not an article or note that is dull, or without real value. That the publisher and editor have fulfilled their desire to establish this journal upon a basis of merit is quite evident to even an unprofessional reader. Subscriptions sent to the above address will be duly honored.

PRACTICAL DENTAL METALLURGY. By THOS. FLETCHER, F. C. S., Warrington, England.

A concise treatise on the physical properties of metals and alloys of actual or possible use to dentists, including Gold, Silver, Copper, Tin, Nickel, Tungsten, Antimony, Aluminium, Cadmium, Iron, Lead, Zinc, Platinum, Palladium, Bismuth; their melting points, expansion and contraction, tenacity, specific heat combining equivalents, specific gravity, resistance to crushing, behavior with acids and alkalis in air, chemical tests, methods of purifying, detection of impurities; the composition and processes of preparation of filling materials at present in use, gold, white fillings and amalgams; the construction of apparatus necessary for metallurgical processes.

Each alternate page will be blank for notes.

The above is now in the press, and is expected to be ready early in January, 1881.

PHYSICIANS' VISITING LIST FOR 1881. Thirteenth year of its publication. Containing the metric or French decimal system of weights and measures, posological tables, showing the relations of our present system of apothecaries' weights and measures to that of the metric system. Gives the doses in both. Philadelphia, Pa.: Lindsay & Blakiston.

BOOKS RECEIVED.

CORRESPONDENZ BLATT für Zahnärzte. Berlin: C. Ash & Sons.

LE PROGRES DENTAIRE. Paris: C. Ash & Sons.

GIORNALE DI CORRISPONDENZA PEI DENTISTI. Redatto dal Dott. Alberto Couilliaux. Parma: Publicato da C. Ash e Figlio.

L'ODONTOLOGIA, Luigi Ribolla, Medico-Chirurgo-Dentista; Palermo.

DENTAL OFFICE AND LABORATORY. Philadelphia: Johnson & Lund.

BUFFALO MEDICAL AND SURGICAL JOURNAL. Buffalo, N. Y.

JOHNSTON'S DENTAL MISCELLANY. Johnston Bros., New York.

THE DENTAL JAIKUS. Sacramento, Cal.

THE DENTAL LUMINARY. Macon, Ga.

THE PHYSICIAN'S AND SURGEON'S INVESTIGATOR. Buffalo, N. Y.

GAZETTE ODONTOLOGIQUE. Journal Officiel de la Société Syndicate des Dentistes. C. V. Delahaye et Cie., Paris.

DENTAL HEADLIGHT. Nashville, Tenn.

DIE ZAHNTECHNISCH REFORM. Gustav H. Pawelz, Berlin.

EL PROGRESO DENTAL DE LA HABANA. Revista Mensual de Cirujia y de Protesis Dentarias, Habana, Cuba.

THE INDEPENDENT PRACTITIONER. Harvey L. Byrd, A. M., M. D., and Basil M. Wilkerson, D. D. S., M. D., editors, Baltimore, Md.

THE DENTAL ADVERTISER.

VOL. XII.—BUFFALO, N. Y., APRIL, 1881.—NO. 2.

SYPHILIS ABOUT THE MOUTH.

BY F. NEWLAND PEDLEY, L. D. S.

A paper read before the Students' Society of the Dental Hospital of London, December 13th, 1880.

MR. PRESIDENT AND GENTLEMEN,—Syphilis is a subject upon which we have had no paper for some years. Yet it is a disease that is constantly exhibiting itself in the mouths of our patients, and exposing us and others to the chance of contagion by inoculation.

I regret to say that a thorough knowledge of the contagiousness of this disease is not as general amongst members of our profession as it should be, and I shall think that a good result has been achieved this evening if I induce you to take extreme care that neither operator nor patient be needlessly exposed to the inoculation of this horrible infection.

No one knows how old syphilis is, but it seems to have been well known to the Moors at the Siege of Granada. The first description that we get of the disease in Europe comes from Barcelona in 1494. The physicians at that date called it *Morbus Gallicus*, and said that it came from France, where it was commonly known as the disease of St. Semente. A Messinese traveler, writing from Barcelona on June 18th, 1494, says:—"On arriving at this port, which is a flourishing city in Spain, I really shuddered at the sight of so many victims of contagious disease." He describes it from report, as "lasting for a year, beginning in the private parts, and then breaking out in other parts of the body." After this it gradually became a recognized and familiar disease, celebrated for its virulent and persistent character.

You are aware that under the head of syphilis are often included two diseases that are locally characterized, the one by soft sores, and the other by a hard sore. I shall make no further reference to soft sores, they are merely local, and do not affect the constitution. In speaking of syphilis to-night I allude to that malady which follows the indurated sore or Hunterian chancre.

The accepted history of a hard chancre is that a vesicle may form within an interval of from five days to a month after exposure to contagion. The vesicle cracks, breaks down, and becomes excavated, and the characteristic induration of the base occurs, feeling to the touch as if the margin of the sore were formed of a layer of parchment.

If left alone the sore will generally heal in six weeks, and about that period secondary symptoms, consisting of a coppery rash, will appear on the body, accompanied with sore throat, and possibly psoriasis about the soles and palms. The disease, if neglected, may go on to the tertiary stage, characterized by gummata and ulceration.

This hurried outline must suffice for an introduction to my true subject, which relates to the disease as seen by dentists. The commonest manifestation of it which I have noticed has been in the form of cracks, fissures, and ulcers about the tongue. There are two forms of these ulcers, *i. e.*, superficial and deep. Paget says that the former are related to the syphilitic psoriasis which appears on the palms and soles; the latter to the deep ulcers that follow gummata. Of the superficial ulcers the most common are such as form at the sides of the tongue. Some of them may not deserve the name of ulcers, for they have thin coverings of epithelium, and do not bleed when roughly touched. They may be like little starred or oblique fissures at the edge and top of the tongue, or may appear as pale, bald, raw patches on the mucous membrane, or, again, they may be single, flat-based, defined, and thin-bordered ulcers through nearly the whole thickness of the mucous membrane. With any of these forms of disease there may be round the ulcers little groups of florid papillæ. All the superficial syphilitic ulcers of the tongue are very sensitive and sore. In course of time nearly the whole surface of the tongue may become opaque, whitish, and smooth, and the whole organ may become large and thick.

In distinguishing syphilitic induration of the tongue from that due to malignant disease, Paget lays great stress upon the comparative hardness of the tumor. He says that the softness of the tumor, the presence of white stains, and the coexistence of other venereal symptoms, are to be our guide in diagnosing syphilis of the tongue.

A useful diagnostic sign by which one may distinguish syphilitic from cancerous enlargement of the tongue is that syphilitic indurations of the

tongue never involve other than the lingual substance, but malignant growths usually make their way into the surrounding tissues.

The peculiar white markings which are so commonly found on the mucous membrane of the mouth of those suffering from constitutional syphilis, though not confined to that disease, are yet very valuable indications of the probable nature of the affection they accompany.

They are seldom seen in cancer, although the tongue is frequently covered with a very thin fur, which, when distributed in patches, might easily be mistaken for these white markings. The attempt to scrape it off will, however, at once distinguish between them, for the syphilitic stains are in the epithelium and not upon it, and cannot be removed. Occasionally punctiform, they more commonly occur as broad flat patches much resembling thin films of bluish milk, at other times they are slightly raised and of a dead white color. When occurring on the back of the pharynx they have been compared by the Irish surgeons to the slimy tracks left by snails.

The deep syphilitic ulcer is usually the result of a broken-down gumma. Gummata appear in tertiary syphilis. They are, at first, hard, rounded, inflammatory growths; they may form in any tissue of the body, and are exceedingly prone to break down and to leave an ulcerated surface. We often see them in the median raphé of the tongue. The typical syphilitic ulcer is described by Holmes as forming a large excavation with foul, raised, crescentic edges and sloughy surface.

By a process strictly analogous to the formation of an ulcer by the breaking down of a gumma, we observe the necrotic perforation of certain bones about the mouth. The bones most liable to this form of necrosis are such as are compact in structure and have thin, soft coverings, such as the palate bones, the palate process of the superior maxilla, the vomer, etc.

It is sometimes very difficult to distinguish the deep syphilitic ulcers from the irritable, the dyspeptic, or the cancerous form. All these ulcers resemble one another greatly in shape, and it must be remembered that any sore place about the mouth may take on the specific form provided the patient be syphilitic, hence an irritable ulcer may become specific. There are, however, certain useful points to aid our diagnosis.

Irritable ulcers get well when the offending tooth or irritating cause is removed. They are usually seen at the point where the teeth touch the side of the tongue or the cheeks.

Dyspeptic ulcers are found in the middle line of the tongue, and the aspect of that organ shows that the stomach is out of order. When the digestion is improved, the ulcers get well.

Syphilitic ulcers will not get well without antisiphilitic remedies. There may be the history of the case or other evidences of syphilis to guide us.

Cancerous ulcers do not get well at all. The submaxillary lymphatic glands become enlarged after a time, while in tertiary syphilis it is the posterior cervical glands that become swollen.

A course of iodide of potassium settles the question between the two latter forms of ulcer, for the syphilitic ulcer heals under its influence, whilst the cancerous does not.

Another form in which syphilis about the mouth is brought before our notice is in the shape of the mucous tubercle. These are described as occurring in flat, raised, oval patches generally situated at or near the junction of the mucous membrane with the skin, covered with a whitish velvety epithelial tissue. In the same situation condylomata are found, consisting of small masses of the hypertrophied structures of the skin, discharging a foul secretion.

I think that we should do well to regard with extreme suspicion all cracks, fissures, and sores of any kind whatever about the lips; for, certain it is that the secretion from these syphilitic sores is inoculable and may be conveyed from the lips of one patient to those of another, unless extreme caution be observed in thoroughly cleansing all our instruments.

Besides syphilis thus acquired by inoculation, there is the hereditary form of the disease, which runs a course very similar to that in adults. Syphilitic children go through the primary stages in utero, and can impart the affection to the healthy mother; their secondary symptoms commence usually about a month after birth, and tertiary symptoms, in the form of diseases of the eye and ear, may follow after a lapse of time.

Dentists ought to know about infantile syphilis, for it modifies the shape of the teeth; so does the mercury that is taken as a remedy for the complaint. The temporary upper central and lateral incisors are generally lost very early, and the children may be brought to us with exfoliation of particles of the alveolar process corresponding to those teeth. You will easily recognize the children by their miserable stunted look, the puny hand, protuberant forehead, flattened nose, and puckered mouth. You will have no need to search for the coppery eruption on the genitals, palms of hands, and soles of feet, in order to interpret the ancient, careworn, superannuated look of the child. The treatment is mercury. Perhaps the very fact that mercury is the only cure for infantile syphilis is the cause of the strange blunder that has existed until the last few years of confounding Hutchinson's syphilitic teeth with "mercurial teeth."

Personally, I would include all the "mercurial," "stomatitic," and "strumous" teeth under the one generic term "stomatitic;" for it is proved beyond cavil that whatever leads to even congestion of the mucous membrane of the mouth or alveolus while the tooth is in process of formation, will produce rocky, honeycombed, pitted teeth. But honeycombed teeth are not necessarily mercurial, for Mr. Samuel Cartwright says he has

seen as many in Germany, where mercury is comparatively seldom given, as in this country. It is no argument in favor of the identity of "mercurial" and syphilitic teeth that both varieties are occasionally found in the same mouth, for the "mercurial pitting" is caused by congestion of the mucous membrane, resulting from the mercury given as a remedy for infantile syphilis.

I fully accept Mr. Jonathan Hutchinson's view on the subject, and this paper would be strangely incomplete if I omitted a brief description of Hutchinson's incisors and Moon's molar. The first molar that bears Mr. Moon's name is dome-shaped and stunted, and is in itself pathognomonic of hereditary syphilis; but the teeth to which the greatest amount of attention has been directed are the permanent upper incisors. Mr. Hutchinson says: "The upper central incisors are short and narrow, their angles rounded off, and their edges exhibit a broad shallow notch." The single broad notch, of greater or less degree of depth, is hardly ever wanting. The teeth are always of bad color. On looking carefully at the surface of the notch there is almost always evidence of wearing, that is, the enamel is not perfect at the scooped-out border of the tooth. I believe that these teeth rarely present the notch at the time of their being cut, there being usually a small projecting lobe. Above the base of this lobe, which is very thin, extends a crescentic line, marking out the size that the notch will have when, as is quickly the case, the thin central plate has been broken or worn away.

The upper lateral incisors deviate but little from the natural type. Rarely are they notched, but they are often small and ill formed.

In syphilitic mouths the canines, as a rule, show blunted extremities, in the centres of which are seen single little tubercles. It is almost always present in syphilis, but is not a reliable diagnostic sign.

The lower incisors hardly ever show notches in their borders. Sometimes their central lobes are peculiarly elevated, and by an excessive development of their tubercles and serrations they come to resemble the teeth of fishes. Eventually the teeth become shortened and peg-shaped.

Syphilitic teeth are further distinguished from stomatitic teeth by the fact that the former look soft, worn, and rounded; the latter are harder, rugged, with well defined margins.

Hutchinson's incisors are not due to mercury, for they have appeared in the mouths of children who have not taken mercury, and those who have taken mercury never display the characteristic syphilitic incisor.

I shall conclude by mentioning a rare form of dental caries that seems to be syphilitic. In vol. xlv. of "*Medico-Chirurgical Transactions*," a case is quoted by Dr. Marston of a syphilitic man whose teeth decayed in a most characteristic manner:

"A dark spot would appear on the front aspect of the enamel close to the gum. The lateral incisors of the upper jaw were the first affected, and disease of the remaining teeth speedily followed. The discolored spot became the seat of caries, and a minute circular hole resulted, situated in the middle line of the tooth bordering upon the gum. The disease in each tooth gradually advanced from before backwards, extending laterally at the same time, and making its way in a very definite manner till the line of caries passed through the tooth, and severed it at its junction with the fang. The lower teeth were affected in a similar way."

Dr. Marston says he has seen this very disease of the teeth follow the same course in two other cases.—*British Journal of Dental Science.*

ON THE SKIN-FURROWS OF THE HAND.

In looking over some specimens of "prehistoric" pottery found in Japan I was led, about a year ago, to give some attention to the character of certain finger-marks which had been made on them while the clay was still soft. Unfortunately all of those which happened to come into my possession were too vague and ill-defined to be of much use, but a comparison of such finger-tip impressions made in recent pottery led me to observe the characters of the skin-furrows in human fingers generally. From these I passed to the study of the finger-tips of monkeys, and found at once that they presented very close analogies to those of human beings. I have here few opportunities of prosecuting the latter study to much advantage, but hope to present such results as I may attain in another letter. Meanwhile I would venture to suggest to others more favorably situated the careful study of the lemurs, &c., in this connection, as an additional means of throwing light on their interesting genetic relations.

A large number of nature-prints have been taken by me from the fingers of people in Japan, and I am at present collecting others from different nationalities, which I hope may aid students of ethnology in classification. Some few interesting points may here be mentioned by way of introduction.

Some individuals show quite a *symmetrical* development of these furrows. In these cases all the fingers of one hand have a similar arrangement of lines, while the pattern is simply reversed on the other hand. A Gibraltar monkey (*Macacus innus*) examined by me had this arrangement. A slight majority of the few Europeans I have been able to examine here have it also.

An ordinary botanical lens is of great service in bringing out these minor peculiarities. Where the loops occur the innermost lines may simply break off and end abruptly; they may end in self-returning loops, or,

again, they may go on without breaks after turning round upon themselves. Some lines also join or branch like junctions in a railway map. All these varieties, however, may be compatible with the general impression of symmetry that the two hands give us when printed from.

In a Japanese man the lines on both thumbs form similar spiral whorls; those of the left fore-finger form a peculiar oval whorl, while those of the right corresponding finger form an open loop having a direction quite opposite to that of the right fore-finger in the previous example. A similar whorl is found on both middle fingers instead of a symmetrically reversed whirl. The right ring-finger again has an oval whorl, but the corresponding left finger shows an open loop.

The lines at the ulno-palmar margin of this particular Japanese are of the parallel sort in both hands, and are quite symmetrical, thus differing from the Englishman's considerably. These instances are not intended to stand for typical patterns of the two peoples, but simply as illustrations of the kind of facts to be observed. My method of observation was at first simply to examine fingers closely, to sketch the general trend of the curves as accurately as possible, recording nationality, sex, color of eyes and hair, and securing a specimen of the latter. I passed from this to "nature-printing," as ferns are often copied.

A common slate or smooth board of any kind, or a sheet of tin, spread over very thinly and evenly with printer's ink, is all that is required. The parts of which impressions are desired are pressed down steadily and softly, and then are transferred to slightly damp paper. I have succeeded in making very delicate impressions on glass. They are somewhat faint indeed, but would be useful for demonstrations, as details are very well shown, even down to the minute pores. By using different colors of ink useful comparisons could be made of two patterns by superposition. These might be shown by magic lantern. I have had prepared a number of outline hands with blank forms for entering such particulars of each case as may be wanted, and attach a specimen of hair for microscopic examination. Each finger-tip may best be done singly, and people are uncommonly willing to submit to the process. A little *hot* water and soap remove the ink. Benzine is still more effective. The dominancy of heredity through these infinite varieties is sometimes very striking. I have found unique patterns in a parent repeated with marvellous accuracy in his child. Negative results, however, might prove nothing in regard to parentage, a caution which it is important to make.

I am sanguine that the careful study of these patterns may be useful in several ways.

1. We may perhaps be able to extend to other animals the analogies found by me to exist in the monkeys.

2. These analogies may admit of further analysis, and may assist, when better understood, in ethnological classifications.

3. If so, those which are found in ancient pottery may become of immense historical importance.

4. The fingers of mummies, by special preparation, may yield results for comparison. I am very doubtful, however, of this.

5. When bloody finger-marks or impressions on clay, glass, etc., exist, they may lead to the scientific identification of criminals. Already I have had experience in two such cases, and found useful evidence from these marks. In one case greasy finger-marks revealed who had been drinking some rectified spirit. The pattern was unique, and fortunately I had previously obtained a copy of it. They agreed with microscopic fidelity. In another case sooty finger-marks of a person climbing a white wall were of great use as negative evidence. Other cases might occur in medico-legal investigations, as when the hands only of some mutilated victim were found. If previously known they would be much more precise in value than the standard *mole* of the penny novelists. If unknown previously, heredity might enable an expert to determine the relatives with considerable probability in many cases, and with absolute precision in some. Such a case as that of the Claimant even might not be beyond the range of this principle. There might be a recognizable Tichborne type, and there might be an Orton type, to one or other of which experts might relate the case. Absolute identity would prove descent in some circumstances.

I have heard, since coming to these general conclusions by original and patient experiment, that the Chinese criminals from early times have been made to give the impressions of their fingers, just as we make ours yield their photographs. I have not yet, however, succeeded in getting any precise or authenticated facts on that point. That the Egyptians caused their criminals to seal their confessions with their thumb-nails, just as the Japanese do now, a recent discovery proves. This is however quite a different matter, and it is curious to observe that in our country servant-girls used to stamp their sealed letters in the same way. There can be no doubt as to the advantage of having, besides their photographs, a nature-copy of the for-ever-unchangeable finger-furrows of important criminals. It need not surprise us to find that the Chinese have been before us in this as in other matters. I shall be glad to find that it is really so, as it would only serve to confirm the utility of the method, and the facts which may thus have been accumulated would be a rich anthropological mine for patient observers.

HENRY FAULDS.

Tsukiji Hospital, Tokio, Japan.

[Some very interesting examples of nature-printed finger-tips accompanied this letter—ED.]—*Nature*.

EXTRACTION OF TEETH FOLLOWED BY INSANITY.

BY DR. EDWARD H. BOWNE, ROCKY HILL, N. J.

On the morning of April 20th, 1880, I was consulted by Frank McVey, aged 23 years, in reference to the extraction of the roots of the superior six year and twelve year old molars, and second bicusped. The patient, a well nourished young man, was suffering from ordinary chronic compound alveola abscess (from more than one root) with opening into the antrum highmore. We advised the extraction of all the roots.

In a large dental practice of more than eleven years, I never saw before, a patient exhibit more terror from teeth extraction; and before operating, prescribed in two doses, three ounces of good apple brandy. The liquor appeared to allay the excessive nervousness and fear of the patient, and in a few minutes proceeded to operate, and extracted without trouble, the roots of the above mentioned teeth, three of which (roots) were connected with encysted abscesses. I thoroughly syringed the antrum highmore with a one to twenty solution of carbolic acid, and ordered it to be continued for five days.

The patient was not particularly affected by the liquor, nor did he appear to have received a nervous shock, but worked the balance of the day on the Bound Brook Railroad.

The *next* day, however, cerebral disorder was manifested, the young man acted strange, had an anxious careworn look, was very dull, complained rather incoherently of pain in the head, and objected "to go to work."

The family physician, Dr. Tompkins of Harlingen, N. J., was called in and diagnosed *congestion* of the brain, and prescribed appropriate remedies. After one month's treatment, the patient was no better, the wounds in the gum were healed in the usual time; no discharge whatever from antrum highmore after the third day.

December 20th, 1880, eight months have elapsed since the teeth were extracted. I was informed to-day by a brother of the unfortunate young man, that he is no better, and his parents have determined to remove him to the Trenton Asylum.

Insanity in this case presents itself as imbecility. A most important point in the etiology of this case, is the sensitive temperament of the unfortunate youth, no other hypochondriac or *functional* neurosis.

There is no mania or dementia, hysteria or epilepsy, no threatening menaces, or atonic agitation. The entire symptomology is summed up in the one expression, imbecility. I have examined the heredity of the entire family, but found no acute evidence of insanity in a record of many years.

REMARKS.—The father of the young man, (a well to do farmer,) is a moderate drinker, the mother is hysterical, and suffering, with nearly every member of the family, Post-Nasal Catarrh of a very offensive character.

After many engagements and much trouble, I succeeded in extracting the mother's upper teeth, which were in a state of complete disintegration, and since the insanity of the son, have extracted the teeth of the oldest daughter, in which case, ether was administered by Dr. Abraham Moses, of Griggstown, N. J., and sixteen worthless teeth extracted at one sitting, no pain during the operation, or bad *after* effects. Both mother and daughter are wearing artificial teeth with comfort.

QUERY.—Does the extraction of the teeth bear on the case, or is the *constitutional* disease of the family, Post-Nasal Catarrh, a factor in the cause?—*Dental Luminary*.

HOW TO CURE A COLD.

One of our readers, who has been troubled with a severe cold on the lungs, effected his recovery in the following simple manner: He boiled a little wormwood and horehound together, and drank freely of the tea before going to bed. The next day he took five pills, put one kind of plaster on his breast, another under his arms, and still another on his back. Under advice from an experienced old lady, he took all these off with an oyster knife in the afternoon, and slapped on a mustard poultice instead. Then he put some hot bricks to his feet and went to bed. Next morning, another old lady came in with a bottle of goose-oil, and gave him a dose of it on a quill, and an aunt arrived about the same time from Eccleshall, with a bundle of sweet fern, which she made into tea, and gave him every half-hour until noon, when he took a big dose of salts. After dinner, his wife, who had seen a fine old lady of great experience on doctoring, in High street, gave him two pills of her own make, about the size of a walnut and of similar shape, and two tablespoonfuls of home-made balsam, to keep them down. Then he took a half-pint of hot rum, at the suggestion of an old sea-captain visiting in the next house, and steamed his legs with an alcohol bath. At this crisis two of the neighbors arrived, who saw at once that his blood was out of order, and gave him a half-gallon of spearmint tea and a big dose of castor-oil. Before going to bed, he took eight of a new kind of pills, wrapped about his neck a flannel soaked in hot vinegar and salt, and had feathers burnt on a shovel in his room. He is now cured and full of gratitude.—*Student's Journal*.—*Canada Med. and Surg. Journal*.

BENEFITS OF TOBACCO.

Habitual users of tobacco will draw some comfort from observations made by the author of a paper read before the Odontological Society of London. This writer, Mr. Hepburn, says that the direct action of nicotine on the teeth is decidedly beneficial. The alkalinity of the smoke must necessarily neutralize any acid secretion which may be present in the oral cavity, and the antiseptic property of the nicotine tends to arrest putrefactive changes in carious cavities. The author is inclined to believe that the dark deposit on the teeth of some habitual smokers is largely composed of the carbon of tobacco smoke. This deposit takes place exactly in those portions where caries is most likely to arise, and on the surface of the teeth which escape the cleansing action of the brush. That tobacco is capable of allaying to some extent the pain of toothache is, he thinks, true—the effect being due not only to its nicotizing power, but also to its direct action on the exposed nerve; and he is inclined to attribute the fact of the comparatively rare occurrence of toothache among sailors, in a great measure, to their habit of chewing tobacco.

THE DENTAL SOCIETY OF THE STATE OF
NEW YORK.

The thirteenth annual meeting of this Society will be held in Albany, commencing on Wednesday, May 11th, 1881, at ten o'clock A. M.

The stated meetings of this body are of the greatest interest and importance to dentists, especially to those residing in this State, from the fact that this is the only legally recognized representative organization embracing the whole profession of the State.

The sessions are open to all who come, and beside the transaction of routine business, the exercises comprise the reading of instructive papers, reports of cases in practice, discussions of important topics, &c.

To increase the value and number of essays, two prizes are offered: one the "Whitney Memorial Prize," consisting of thirty-five dollars, for which members only are allowed to compete; and the other, a special prize of forty dollars, upon "Improvements in Dental Practice since July 1st, 1868," which is open to all dentists, but the regular essays for the next annual meeting of this Society are not to be entered for this prize. The chairman of the Committee on Prize Essays is W. A. Bronson, No. 8 East 34th Street, New York.

The regular appointments as essayists for the approaching meeting include N. W. Kingsley, C. E. Francis, J. W. Clowes, G. W. Weld, New York ; C. A. Marvin, Brooklyn; A. M. Holmes, Morrisville ; S. B. Palmer, Syracuse ; and A. P. Southwick, Buffalo.

Visitors from kindred organizations in adjoining States will be cordially received.

These annual gatherings have heretofore been especially noted for the good feeling and sociability which have ever prevailed, and this characteristic will, it is hoped, be more perfectly cultivated this year.

The Board of State Censors will meet, as heretofore, on Tuesday, May 10th, at ten o'clock A. M., for the examination of candidates for the degree of "Master of Dental Surgery" (M. D. S.), but no examination will be made during the sessions of the annual meeting of the Society.

No person can now legally commence the practice of dentistry in this State unless possessed of a diploma approved by the State Dental Society, provided such person has not been previously registered, in compliance with the State Law passed June 20th, 1879.

Hotel accommodations at Albany are procured at reduced rates by the Committee of Arrangements, and all possible attention will be given to the comfort and convenience of members and visitors in attendance.

MEETINGS OF DENTAL SOCIETIES.

THE EIGHTH DISTRICT DENTAL SOCIETY of the State of New York will hold its thirteenth annual meeting in Buffalo, April 26th and 27th. The Business Committee are making special arrangements for an unusually interesting session this year, and it is earnestly hoped that not only all the members of the Society but every dentist within the district will endeavor to attend this meeting.

For any particulars regarding the Society, address the Secretary, Dr. Charles L. Butler, 263 Main Street, Buffalo, N. Y.

THE ILLINOIS STATE DENTAL SOCIETY will hold its sixteenth annual meeting at Bloomington, on Tuesday, May 11th, and continue four days. Dentists from other States are cordially invited to be present.

THE KANSAS STATE DENTAL ASSOCIATION will hold its regular annual meeting at Emporia, Kansas, commencing Tuesday, May 4th. Reduced rates at the Merchants and Park Place Hotels. A cordial invitation is extended to the profession throughout the State to meet with, and connect themselves with the Association.

REMOVAL.

The Buffalo Dental Manufacturing Co. take pleasure in informing dentists, chemists, the "trade" and its patrons generally, that they are now permanently quartered in the fine five-story building, Nos. 21 and 23 Court street, corner of Pearl. The interior of the building has been entirely remodeled and refitted for the especial accommodation of the various departments of our business as manufacturers of and dealers in dental merchandise and special chemical apparatus, and we take no little pride in stating that for convenience in arrangement of the several manufacturing divisions, together with facilities for transacting business in our well lighted and handsomely equipped depot, that we now have an establishment second to none in the country. A full description of our new building, together with an engraving, will appear in the July number of the DENTAL ADVERTISER.

GOODYEAR DENTAL VULCANITE CO.

Recent advices from Washington assure us that no application has yet been made for an extension of the Cummings' patent, so *that* danger is past for the present. No action can be taken in the matter till the next session of Congress.

Obituary.

LANSING B. COOK, D. D. S.

The subject of this notice was born in Sodus Point, Wayne County, New York, April 22, 1848.

He commenced the study of dentistry in 1868, attended two courses of lectures in the Philadelphia Dental College, and graduated in 1871. In the early Summer of 1872, he came to Buffalo and entered upon the active duties of his profession, which he continued to discharge uninterruptedly until November last, when from impaired health and in accordance with the advice of his medical friends he relinquished his practice, and went to Geneva, Orange County, Florida, hoping to regain his health by spending the Winter there, but died of consumption, February 27th, 1881, in the thirty-third year of his age.

Dr. Cook was unmarried, but leaves a widowed mother, brothers and sisters, together with a large circle of young friends and associates to whom his cheerful disposition and attractive manners had endeared him.

He was a member of the Eighth District Dental Society of the State of New York.

MISCELLANEOUS NOTES.

A British Surgeon is said to have remarked that he thought it a good thing for a man to get syphilis, because whatever might be the matter with him thereafter, he could always be cured with iodide of potassium.

The Cat as a Pest Distributer.—The domestic cat is again charged with spreading disease, this time by the physicians of a district in Sullivan county, New York, where small-pox is epidemic. In several cases the proof is pretty strong that house cats carried the pest, and owners of cats have been warned to keep them from roaming about.

At the Commencement of Rush Medical College of Chicago, on Feb. 22, Dr. W. W. Allport, the well-known dentist, was made the recipient of an unusual and special honor. Out of respect for his eminent services and professional ability, the degree of M. D. was conferred upon him, and in a special speech of congratulation and respect, President Allen presented him with his honorably deserved diploma.

It has been recently stated that a woman near Maregnac, France, being several months pregnant, was seized with colicky pains. Attributing these to ordinary causes, she went to her vineyard, and was profoundly astonished to discover presently that she had been confined. Dr. Watering was called to her, and found that she had given birth to eight perfectly formed children. They were enclosed in a sac, and had apparently perished from mutual pressure during their growth. The mother did well.

Inception and Duration of Menstruation.—Dr. Bensenger (Medical Gazette), after a series of investigations in Moscow and its environs, has found that the average age of commencement of menstruation, in 5,611 cases, was fourteen years, eight months and fifteen days; that women in the upper classes generally menstruate earlier than those in the lower classes; that menstruation ended between the forty-third and forty-eighth year, and that the average persistence of menstruation was thirty-two years.

Hardening Steel.—According to a Sheffield paper a very fine preparation for making steel very hard is composed of wheat flour, salt and water, using, say, two teaspoonfuls of water, one-half a teaspoonful of flour, and one of salt. Heat the steel to be hardened enough to coat it with the paste by immersing it in the composition, after which heat it to a cherry red and plunge it into soft water. If properly done, the steel will come out with a beautiful white surface. It is said that Stubs' files are hardened in this manner.

Fatal Discipline.—Archibald Gibson, Second Lieutenant Seventh U. S. Cavalry, died in St. Paul, Minn., January 26. The cause of his death was inflammation of the brain, said to have had the following curious origin. One day, while he was on parade at West Point, a spider got into one of his ears. By the rules, he was not allowed to raise his hand, and stood in the ranks more than an hour, while the spider worked his way into the ear. When dismissed his ear was full of blood, and the insect could not be removed for two days. The injury caused him much trouble, but did not prevent his assignment to his regiment in Northern Dakota. After some service, Lieutenant Gibson returned to his home in St. Paul, intending to resign, but, really, to die. His death is charged to inflammation of the brain, caused by necrosis of the inner wall of the skull adjoining the ear, the result of the spider's invasion.

Glycerin in Gastric Troubles.—Dr. Sidney Ringer calls the attention of the profession, in the *Lancet*, to the value of glycerin as a remedy in flatulence, acidity of the stomach, and pyrosis. He states that sometimes he finds all of these gastric troubles combined, but glycerin in nearly all cases relieves them. In some cases, too, it removes pain and vomiting, probably, like charcoal, by preventing the formation of acrid acids,

which irritate delicate and irritable stomachs. Glycerin does not prevent the digestive action of pepsin and hydrochloric acid, and hence, while it prevents the formation of wind and acidity, probably by checking fermentation, it in no way hinders digestion. He administers a drachm to two drachms either before, with, or immediately after food. It may be given in water, coffee, tea, or lemon and soda water. In tea and coffee it may replace sugar, a substance which greatly favors flatulence, as, indeed, does tea in many cases. In some cases a cure does not occur till the lapse of ten days or a fortnight.

BOOK NOTICES.

HORSES TEETH. A treatise on their mode of development, physiological relations, anatomy, microscopical character, pathology, and dentistry; based on the works of well-known Odontologists and Veterinary Surgeons; to which is added a vocabulary of the medical and technical words used. By WILLIAM H. CLARKE, New York. Published by the Author.

This book is in a great measure a compilation from works on dentistry, anatomy, physiology, microscopy and veterinary surgery, as they relate to the development, structure and care of the teeth of horses. As we are a believer in "horse dentistry," we have looked over the work with much pleasure and no inconsiderable profit.

PRACTICAL DENTAL METALLURGY. By THOS. FLETCHER, F. C. S., Warrington, England.

A concise treatise on the physical properties of metals and alloys of actual or possible use to dentists, including Gold, Silver, Copper, Tin, Nickel, Tungsten, Antimony, Aluminium, Cadmium, Iron, Lead, Zinc, Platinum, Palladium, Bismuth; their melting points, expansion and contraction, tenacity, specific heat combining equivalents, specific gravity, resistance to crushing, behavior with acids and alkalis in air, chemical tests, methods of purifying, detection of impurities; the composition and processes of preparation of filling materials at present in use, gold, white fillings and amalgams; the construction of apparatus necessary for metallurgical processes.

Each alternate page is blank for notes.

This book is just what we might expect from so practical a man as the author. Every article, paragraph or recipe is short, concise and to the point. Words are made to convey a specific meaning; formulas are exact and deduced from actual experiments; in short, brevity and practicability are the characteristics of the book.

The Buffalo Dental Manufacturing Co. will be able to fill orders for the book about May 1st.

DENTAL ALMANAC FOR 1881. An alphabetical list of dental practitioners in Prussia, with two portraits on steel. Compiled by ADOLPH PETERMANN, D. D. S. Frankfort, A. M., 1881.

OHIO STATE JOURNAL OF DENTAL SCIENCE, GEORGE WATT, M. D., D. D. S., Xenia, Ohio, editor. Published bi-monthly by Ransom & Randolph, Toledo, Ohio.

This new candidate for professional favor promises to be, judging from the initial number, the brightest and best edited of all the dental journals, but we fear that the talented editor will hardly hold out as he has begun, as the tax he has imposed on himself of producing so much original matter is not easily to be overcome.

The Journal is finely printed and its "make up" a great credit to those having the matter in charge—in short, it is "the" Dental Journal of America. Price, \$1.50 per year, in advance.

BOOKS RECEIVED.

- CORRESPONDENZ BLATT für Zahnärzte. Berlin : C. Ash & Sons.
 LE PROGRES DENTAIRE. Paris : C. Ash & Sons.
 GIORNALE DI CORRISPONDENZA PEI DENTISTI. Redatto dal Dott Alberto Conilliaux.
 Parina : Publicato du C. Ash e Figlio.
 L'ODONTOLOGIA. Luigi Ribolla. Medico-Chirurgo-Dentista ; Palermo.
 DENTAL OFFICE AND LABORATORY. Philadelphia : Johnson & Lund.
 BUFFALO MEDICAL AND SURGICAL JOURNAL. Buffalo, N. Y.
 JOHNSTON'S DENTAL MISCELLANY. Johnston Bros., New York.
 THE DENTAL JAIKUS. Sacramento, Cal.
 THE DENTAL LUMINARY. Macon, Ga.
 THE PHYSICIAN'S AND SURGEON'S INVESTIGATOR. Buffalo, N. Y.
 GAZETTE ODONTOLOGIQUE. Journal Officiel de la Société Syndicate des Dentistes.
 C. V. Delahaye et Cie., Paris.
 DENTAL HEADLIGHT. Nashville, Tenn.
 DIE ZAHNTECHNISCH REFORM. Gustav H. Pawelz, Berlin.
 EL PROGRESO DENTAL DE LA HABANA. Revista Mensual de Cirujia y de Protesis
 Dentarias, Habana, Cuba.
 THE INDEPENDENT PRACTITIONER. Harvey L. Byrd, A. M., M. D., and Basil M.
 Wilkerson, D. D. S., M. D., editors, Baltimore, Md.
 OHIO STATE JOURNAL OF DENTAL SCIENCE. Ransom & Randolph, Toledo, Ohio.
 ANÆSTHESIA. By W. C. Barrett, M. D. S., D. D. S., M. D., Buffalo, N. Y. Read before the
 American Dental Association, at Boston, Mass., August, 1880.

DENTAL PATENTS.

ISSUED FOR THE QUARTER PRECEDING THE DATE OF THIS JOURNAL.

- 234,422—Nov. 16, 1880.—TOOTH PICK. Enoch Osgood, Brooklyn, N. Y.
 235,480—Dec. 14, 1880.—DENTAL AMALGAM FILINGS.—Richard S. Williams, New
 York, N. Y.
 236,326—Jan. 4, 1881.—DENTAL ENGINE.—Charles P. Grout, New York, N. Y.
 237,043—Jan. 25, 1881.—MEANS FOR TREATING TEETH.—Philip A. Palmer, Chicago,
 Ills. Assignor to himself and J. Norton Chilson, same place.
 237,093—Feb 1, 1881.—TOOTH PICK.—John H. Crowell, Providence, R. I.
 238,334—March 1, 1881.—ARTIFICIAL TOOTH CROWN.—William G. A. Bonwill,
 Philadelphia, Pa.
 238,382—March 1, 1881. ARTIFICIAL TOOTH CROWN. Wm. H. Gates, Philadel-
 phia, Pa.

FLETCHER'S DIFFERENTIAL BALANCE

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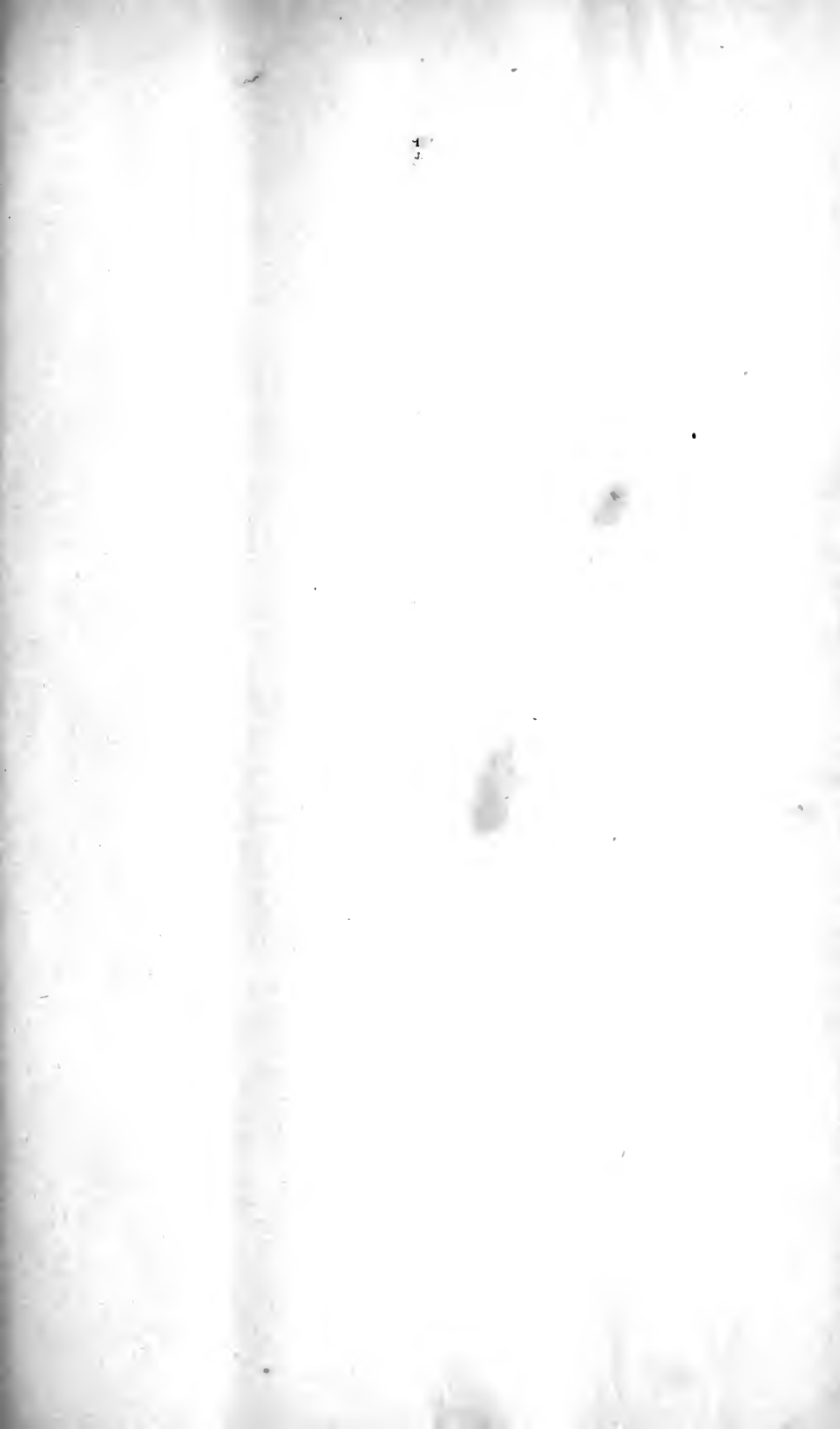
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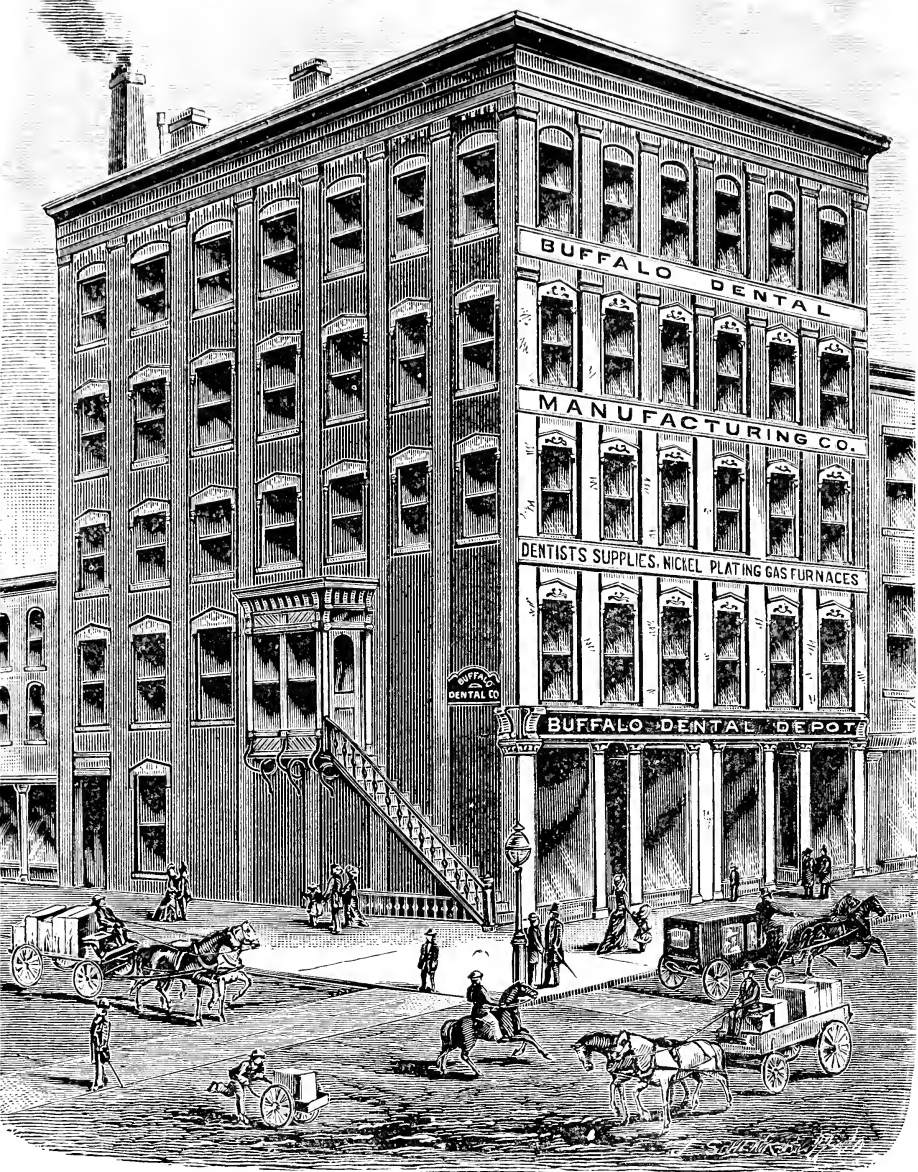
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DENTAL ADVERTISER.

VOL. XII.—BUFFALO, N. Y., JULY, 1881.—No. 3

ON THE MODE OF ORIGIN OF SOME SECONDARY LESIONS.

A paper read before the Students' Society of the National Dental Hospital and College, March 11, 1881.

BY EDWARD W. COX MOORE, L.D.S.R.C.S.I.

MR. PRESIDENT AND GENTLEMEN,—In most books on Dental Surgery a considerable amount of space is usually devoted to a description of the nervous affections which may result from the condition of the teeth, these diseases occurring in some cases where a healthy tooth is undergoing normal development, and in others where we have to deal with a tooth which has undergone decay, or one in which some new growth presses upon the nerves in connection with the tooth. This subject is one which it is difficult to handle from a purely Dental point of view, owing to the various structures which have to be brought under consideration and the variety of diseases that may affect those different structures.

The object of this paper is not to give a *résumé* of the multiform diseases resulting from irritation in and about the teeth, but rather to investigate the question as to the mechanism by which some of the more complex cases of reflex irritation, with the resulting lesions, can be explained and shown to be parallel to the mode of production of other diseases in the body. It will perhaps simplify matters to commence by giving a few examples of the special form of secondary disease which it is the object of this paper to elucidate.

The first example we take is one related by Mr. Hilton of the late celebrated Dr. Addison.

"The latter was suffering from an offensive discharge from the auditory canal of one of his ears, which annoyed him very much, and below the external ear was a small gland enlarged in the upper part of the neck. He had tried various remedies for this discharge, and had gone, I believe, to some surgeons who made a specialty of diseases of the ear, but as far as I could judge no good resulted from any of their applications. Upon examining the ear from which the offensive discharge proceeded, I found a slight ulceration upon the floor of the auditory canal. On arguing the question out between us, we came to the conclusion that the ulceration probably depended upon a diseased molar tooth in the lower jaw on the same side. We had that tooth extracted, and in a very short space of time the ulcer healed, the discharge and morbid secretion disappeared from the auditory canal, and so soon as that ulceration was cured, the enlarged gland subsided."

In this case the symptoms, though troublesome, were not dangerous: but we pass on next to a class where more important structures are affected, so ably described by Dr. Woakes in his work on "Deafness, Giddiness, and Noises in the Head," viz:

"A child is cutting its teeth, and while the gums are yet swollen it suffers acutely from earache; any one accustomed to watch carefully the symptoms of these little patients will scarcely fail to discern in the troubled face, the thrill of agony, accompanied with cries or shrieks, when its position is moved, and above all the constant raising of the hand to the side of the head; no one who has watched these symptoms will fail to connect them with the most agonizing sufferings of early life—'earache.'

"On examining under these circumstances with the speculum, in a good light, the drum of the ear, it will be found to have exchanged its pearly-like lustre for one of redness; this gradually extends to the lining membrane of the cavity of the tympanum, and unless this condition be actively treated by lancing the gums and local removal of blood, the further stage is soon reached at which formation of pus commences, and the child becomes permanently deaf from bursting of the membrane, or the still more serious complication occurs of extension of inflammation to the membranes of the brain, an occurrence for which every facility is arranged by the intimate communications which, in the infant especially, exist for such an issue, convulsions, coma, and death rapidly succeed."

Now, the point I wish to emphasize is this: the pain is not what we vaguely term neuralgia; it is a definite trophic change, an inflammation taking place in the deeper seated tissues of the ear; the gums are lanced and thereby reflex irritation is lessened.

But a child has by no means escaped ear trouble arising from the teeth if it has safely passed over the period of their evolution. External otitis has been distinctly traced in children to the presence of a carious

tooth, and even in later life a decaying tooth will indicate its presence by prolonged earache and will even establish an otorrhœa. The first example I gave you was of this kind.

As another example of trophic or nutrition lesions of a more trivial kind I may mention the following, recorded by Mr. Hilton :

“A person was brought to me by a surgeon, suffering very great pain on the left side of his face. He was much exposed to the weather and suffered a great deal in consequence. He had taken a good many things to cure the ‘neuralgia’ as it was termed. I observed that he wore a wig, and I asked the reason. He said, curiously enough the hair on my left temple has all turned gray. I did not like to have black hair on one side and gray on the other, so I had my head shaved and wear a wig. Upon examining his mouth, I found he had a decayed molar tooth (rather painful) on the left side of the lower jaw, supplied by the third division of the fifth nerve. When this second lower molar was extracted the neuralgic pain very nearly ceased. I have not seen the patient since, so cannot say whether or not the hair has recovered its color. All I can say is, it was stated to me that during the time he was suffering extreme pain on the left side, the hair over the temporal region became nearly white, the difference in color suggesting to me some structural deterioration, and to the patient the propriety of having his head shaved and wearing a wig.”

Another case is related where the constant presence of fur on one-half of the tongue caused a patient to seek advice. The patient was found to have a decayed molar tooth on the same side as furred tongue. The tooth was removed, and a fortnight afterwards all the fur had subsided.

Quite a different explanation has been put forward of this unilaterally furred condition of the tongue, viz., that the half of the jaw in which the diseased tooth is situated is but little used in mastication, and hence no removal of epithelium of the tongue takes place by the friction of the food on that side. This objection is completely overruled by the following:—It is shown that the tongue was furred only over the distribution of the lingual gustatory to the anterior part of the tongue, whereas it is clear that if the furring had resulted merely from a want of use of that part of the jaw, the fur would not have been limited to the anterior, but likewise have affected the posterior part of the tongue; this part, which receives its nerve supply from the glosso-pharyngeal nerve, may sometimes be seen to be furred in cases of inflamed tonsils, which also receive branches from the glosso-pharyngeal.

Mr. Hyde Salter relates the case of a healthy young woman, from Bournemouth, who consulted him on account of an ulcer, about the size of a shilling, on the side of the neck; this had commenced some twelve months before as a painful red spot and had been treated by applications of every kind without the slightest improvement in the condition of the

ulcer. Mr. Salter examined the mouth, and found the wisdom (lower) on the same side of the jaw as the ulcer to be in an advanced stage of caries; this tooth was promptly extracted and within a fortnight after, the ulcer was completely cured and remained a firm cicatrix ever after.

In all the examples I have given you a definite nutritive change has been found to exist in the irritated area, whether resulting in such slight changes as the turning grey of hair, a condition found normally later in life, in the production of an excessive amount of ill-formed epithelium, or a condition of hyperæmia, inflammation, and suppuration, as exemplified in the ear disease, up to the local destruction or death of tissue resulting in an ulcer.

The question now before us is to find the solution of the various symptoms detailed. Taking the case in which inflammation of the external ear resulted from the cutting of a tooth, we have the phenomena of pain, inflammation, and suppuration in an organ widely separated from the recognized exciting cause, and with no obvious intercommunication between the two except through the medium of nerve fibres; the simple continuity of sensori-motor nerves is insufficient to produce the conditions under review. The explanation will be found in the relation of the vaso-motor nerves and the functions which it is their office to fulfil. These vaso-motor nerves have the power of altering the size of the arteries to which they are distributed, and by this means can increase the supply of blood entering the part to which the irritation is applied, or when they act so as to contract the vessels greatly diminish the amount of blood circulating.

The action of the sympathetic nerve just described can be clearly shown in a transparent tissue, such as is found in the ear of a white rabbit. Section of the sympathetic supplying the ear causes a deep blush to suffuse the whole organ, showing an increase of blood supply from an enlargement of the calibre of the blood-vessels. On the other hand, irritation of the cut end of the sympathetic by an electric discharge immediately produces an unnatural pallor in the pinna of the ear. Now, a considerable portion of the blood supply of the membrane of the drum is derived from an artery that leaves the internal carotid and proceeds by a very short course to its destination, being thus closely connected with a large arterial trunk; this small artery possesses very favorable circumstances for a speedy augmentation of its blood supply. Now, the sympathetic supplying the carotid plexus comes largely from the otic ganglion, which ganglion controls the circulation of this part. On the other hand, the inferior dental nerve supplying the teeth and gums also communicates with this ganglion. We thus arrive at a direct channel of nerve communication through the otic ganglion, between the source of irritation, the tooth, and the vascular supply of the drumhead. Therefore, any irritation of the nerve in the vicinity of the tooth passes upwards to

the otic ganglion, from which it is reflected to the nerves governing the blood supply of the drum, the vessels of which become largely distended, and if the irritation be sufficiently prolonged, an effusion takes place into the tissues of the drum, and finally, the formation of pus results. This disturbance of the vessels soon extends deeper and pus distends the internal ear, causing perhaps rupture of the drum, or terminating in convulsions and death. It will thus be clear that earache, under whatever circumstances it occurs, whether resulting from tooth diseases or any other cause, is never a trivial accident to be treated with a boiled onion or warm oil. The correct treatment may be roughly summarized under two heads: 1st. Removal of the cause, as by lancing a swollen gum or removing a decaying tooth. 2d. By the treatment of the effects, which will vary according to the stage at which they have arrived. Thus, if there is only a hyperæmia, apply a leech inside the pinna of the ear, and give small doses of tincture of aconite frequently, to diminish the heart's action, following this up with syringing the ear with warm water. If the disease has gone on to the formation of matter, we must follow the ordinary rule and give exit to it either by puncturing the drum or opening the mastoid cells.—*British Journal of Dental Science.*

MEDICO-DENTAL JURISPRUDENCE.

BY J. H. WARNER, D.D.S., COLUMBUS, O.

In the field of Medical Jurisprudence, the dental profession must, from the necessities arising from natural causes and the complicated forms of our modern civilization, take and maintain a most important position. Shipwreck on the seas and accidents of various characters on land, are all too frequently sending their victims to untimely graves, while crime, with its bloody hand, adds all too frequently to their numbers. In a very large percentage of these cases of untimely death, the sure and certain identification of the remains, and thereby the positive proof of the death of the party in question, becomes a matter of paramount importance. In cases of questionable *post-mortem* identity, there arises at once the occasion and the necessity for proofs which are incontrovertible. On the solution of this question hang the hopes and fears, the days and sorrows of many a loving heart. On its solution, also, hang the decrees of courts, the entailment of estates, the payment of life insurance, and, in case of crime, perhaps the life and liberty of a supposed criminal. So quickly, in many instances, does the work or causes of death entirely destroy all ordinary means of identification of the subject, that a necessity has arisen for another—a newer and better method than which has yet come into general adoption. And in cases

of natural death, circumstances not infrequently arise that render identification a matter of much importance, but render its accomplishment at the same time extremely difficult. The height of the person, the color of the eyes and hair, and the age, all at best but approximate evidence in any case, and after the lapse of time, when the soft tissues become destroyed, they are all of no certain and positive value as a means of identification. Fortunately, it so happens that at this point the testimony of the dentist, in many instances, may be of the most convincing character. His work has been among the most enduring structures of the human frame, and when all else has perished the teeth stand as enduring evidence of identification, provided the dentist, as in moral duty bound, has kept a record of his work. The number of operations and their exact location, form a combination of proof whose stronghold increases in geometrical proportion to their number. Teeth filled, extracted, or inserted artificially, speak with an eloquence that must carry absolute conviction to the mind of the dentist whose operations have been made the object of daily record. The number of changes that may be wrought in a set of 32 teeth is so great that figures stand aghast at its expression, though a simple mathematical calculation suffices to solve the problem. The number of combinations that may be wrought upon 16 figures, which equals the number of teeth on either jaw, is 407,080,132,669,600, and there are just two chances in the above number that any two operations upon a full denture of 16 teeth will be exactly alike. Having given, then, the exact diagram of the dental operations upon, and the exact condition of any 16 teeth, there is just one chance in the above number that any other mouth in the world can be found to exactly correspond with it in every particular. This can be simply illustrated by dice, each of which has six sides. With one dice any given number will be thrown, on an average, every sixth time; with two dice, every 12th time; with three dice, every 36th time; with four dice, every 144th time; with five dice, every 720th time, and with six dice, every 4,320th time, and so on, the difficulty increasing in geometrical progression with the increasing number involved. From the foregoing propositions, it is clear that in case of *post-mortem* identification the production of a dentist's book and exact correspondence of the diagram registered there, with the denture of the body in question, would be such positive proof as could not possibly be ignored by any intelligent court. It is like producing the key to a combination lock—the one who can produce it would certainly be adjudged the owner of the lock and all it secures. I recite a few cases to illustrate the foregoing propositions.

In Western Michigan, eight years ago, a banker was murdered and his bank robbed the same night. Some weeks after, a body was found on the shore of Lake Michigan, but in so swollen and distorted a condition that the authorities differed as to the identity of the body. In the meantime

the banker's partner was arrested and in jail awaiting trial for the murder. His counsel ingeniously advanced the theory that there had been no murder at all—that the man supposed to be murdered had robbed his own bank and fled the country. Under these circumstances the identification of the remains became a matter of grave importance, and the dentist of the missing man was called to identify the body. He testified to having filled a certain tooth with gold for the supposed murdered man, which corresponded with the same tooth which was also filled with gold in the mouth of the found body. But the dentist had kept no record of the case and had to trust entirely to his memory, and adroit counsel succeeded in throwing such a glamour of doubt about his testimony, that the jury were constrained to pronounce the identity of the body not proven, and it never was proved, mainly because the dentist failed to keep a record of his operations. All will remember the celebrated Parkman-Webster case, in which the identity of the body was proven because among the calcined bones the venerable dentist, Dr. Keep, of Boston, was able to identify the teeth and a gold plate which he had made for the murdered professor of Boston College. Years ago, in a Michigan town, in which I resided, a young man aged 20 years had his life insured in an "Accident Life Insurance Company" for \$10,000. Shortly after he was reported drowned by the upsetting of a skiff on the St. Clair River. A month after, a body was found upon the shore corresponding well with the height and size of the insured party, but the soft tissues were in such an advanced state of decomposition that the parties who knew the missing man well could only testify that they believed the body was his, and the body was buried on the shore where it was found. I had a few weeks previously operated for the young man and could have sworn positively whether the body was of the insured party had I been called upon to do so, and on this question the result of the suit for payment would have mainly hinged. The insurance company, however, had its suspicions aroused, and while the claimants were clamoring for their money the supposed dead man was unearthed in the far West by a detective, and the swindle was exposed. The young man, after the alleged upsetting of the skiff, had swam to a passing vessel, been picked up and taken to Chicago, and then gone West to grow up with the country, leaving his bereaved parents to collect the insurance policy and follow after. In this case the identity of the body found could have been disproved conclusively by an examination of the teeth after all other means had failed, but crime, which is ever blind, had overlooked this fatal defect in their chain of evidence on which they relied to establish their proof of the death of the insured party.

When the fair young Prince Napoleon IV. fell beneath the weapons of barbarians in Zululand, the succession of a throne depended to some extent upon the identification of the remains, and this was established

beyond a doubt by his dentist, who had inserted several gold fillings in the front teeth of the gallant but unfortunate successor to the throne and fortunes of the imperial Bonapartes.

The foregoing are but a few of the cases which might be cited, but they are freighted with the weight of useful lessons whose moral is so obvious as not to need elaboration.—*Transactions of Ohio State Dental Society, Dec. 1880.*

THE CHEMICAL AND PHYSICAL EFFECTS OF FILLINGS UPON TEETH.

BY THOMAS FLETCHER, F. C. S.

The article on this subject by Dr. Mayr, in the *British Journal of Dental Science*, for May 15th, is one which cannot be allowed to pass without comment. Two things he states can readily be taken for granted. First, that "his practice in Dentistry is very limited," second, that "the task he has undertaken is almost too difficult for him." Any one reading his paper with a knowledge of the subject would at once give him credit for correctness, at least, on these two points. Why he should attempt to do what he has done, knowing so well his own incapacity, is hard to see. It might be desirable to know how he connects "lazy schoolboys" and "algebra to equations in the third degree" with Dentistry, but it will be better to examine at once his positive statements.

First, we will take the remark that "gold *certainly does not* exclude moisture as well as *any* of the other fillings." To any one who has actually tested the moisture tightness of soft gold or of cohesive gold properly packed with ball-faced pluggers, the statement is an absurdity. I am not by any means a first-rate operator, but I will undertake to make a plug of either soft or cohesive gold absolutely tight against penetrating dyes, and any second-rate operator who understands his material and instruments can do the same easily.

If Dr. Mayr eats "oyster stew at a temperature of 130° F.," getting it carefully in contact with his gold fillings, and then "within six seconds drinks ice water at 32° F.," getting this also carefully in contact with his gold fillings, one can only regret his want of common sense and consideration for his own feelings. His example is not likely to be followed generally.

He states that amalgam is acted on by the liquids of the mouth sufficiently to fill up small cracks between tooth and filling and to become *cemented to the tooth*. May I ask if any operator has ever seen such an effect as this in one single case in the course of his practice?

He states that "all silver amalgams are very soft, shrink considerably, and lose relatively easily their mercury." If he will take pure precipitated silver and mix it with no more mercury than is absolutely required to make a hard plug, packing it in a glass tube which is sealed so firmly as to prevent lifting, he will find in a few days that the expansion has burst this tube unless it is excessively strong, and that the plug is so hard as to be cut out only with great labor. It is certainly hard enough to stand twenty years on the grinding surface of a molar.

Again, he says, "the mercury evaporates from platinum as if no combination had taken place." If he had said *when* no combination takes place, he would have been correct; mercury and platinum combine with difficulty, and only under peculiar conditions, and it is evident he has not succeeded in obtaining this combination.

He is "at a loss to say why makers put gold or platinum in their amalgams if it is not to give them some nice taking name." If he will take an alloy which has platinum *in proper combination* and the same without platinum, he will find that the former sets hard in about one-fourth the time, that it is much harder, and that it is far less liable to alter in form or ball up after hardening. A mixture of platinum with other metals without proper combination is of no value, and is apparently what he has experimented with. Platinum cannot be got in combination by the processes usually published. The use of gold is to make an amalgam cleaner and pleasanter in the hand, and its use, except to a limited extent, is to be condemned, as it reduces the setting power seriously. He says oxyphosphates "resist" far more than oxychlorides. If he will take a first-rate phosphate of zinc cement and a first-rate oxychloride of zinc, he will find that the resistance to all solvents is wonderfully similar, the difference is detected only by careful experiment, and, if anything, on the average is in favor of the oxychloride. It is no test to take a good sample of one and a bad one of the other. The phosphate cements have the advantage of being harder and less liable to be damaged by moisture, but so far as actual permanence is concerned, in the hands of a good operator there is no choice. The phosphate cements are at present in the fashion, and are more generally successful in the hands of careless, slovenly operators, but with proper manipulation and proper care the oxychlorides are, when good, quite as permanent and have the advantage of being far less opaque. The careless operator is still a large element, and he has to be studied by the makers of filling materials; for him the phosphates are a blessing, as his carelessness is less liable to cause failures with this than with any other white filling.

When a writer begins by acknowledging that his task is too difficult for him, and then goes on to prove this statement most thoroughly, his contribution is liable to do much more harm than good.—*British Journal of Dental Science.*

Apropos to the above, we print the subjoined extract from an editorial in the same number of the *Journal*:

In the last number of this journal we republished, from an American source, an article on "The Chemical and Physical Effects of Fillings upon Teeth," which we fully expected would elicit some replies. And in this we have not been disappointed, for it has called forth an answer from one who is, in this country at least, the best qualified to undertake the task. Mr. Mayr is a chemist and physicist of some reputation in his own land, but he is careful to tell us that his practical experience of Dentistry is very limited; Mr. Fletcher, on the other hand, besides being an accomplished chemist, has the further advantage of being a practical Dentist of no mean skill; it is not to be wondered at, then, that he has little difficulty in disposing of Mr. Mayr's rather surprising statements.

But it is not with these that we wish to concern ourselves just now; we wish rather to consider in what spirit suggestions from an outsider should be received. It seems to us that this should depend entirely on the spirit in which they are made. When a man puts himself forward and dogmatizes blindly on a subject about which he knows little or nothing, he deserves to be put down or, as it is generally termed, snubbed. But if, as in this case, the speaker states honestly, I don't know anything about Dentistry, but I do know something of chemistry, and I will tell you how my knowledge leads me to view some of your processes which are governed by the laws of chemistry, we think that that man deserves different treatment, and from this point of view we think Mr. Fletcher is rather too severe on his opponent.

We would especially dissent from Mr. Fletcher's opinion that such a paper as this is likely to do more harm than good. In our opinion nothing is more improving than the criticisms of an educated layman. We are all far too prone to adopt practices empirically and without properly thinking out and weighing the steps by which we have arrived at a given conclusion. Few can boast of the combination of theoretical with practical knowledge which Mr. Fletcher himself possesses, and it needs some such stimulus as our chemical friend supplies to rouse us to give an account of the faith that is in us.

FACT VERSUS FICTION.

Editor Missouri Dental Journal: I see in your issue for March, a communication from Dr. Patrick, in reply to my criticism on his paper, in which reply he has, as before, taken a great deal for granted, of which he is ignorant.

I am no more interested in the manufacture of amalgams than I am in the manufacture of gold preparations. Speaking as a question of

profit, I should be exceedingly pleased to learn that the use of amalgams was totally at an end. I speak positively what I know about them in actual use ; not because I wish their use to be continued if a good substitute can be found, but because they fill a place well which no other known material will fill.

Dr. Patrick takes the liberty of criticising my experiments on the loss of mercury from amalgams before he knows what those experiments were. The full details were published many years ago in the English journals, and I did not hunt these details up, simply because I had something else to do.

Dr. Patrick says he has no interest in the matter. I have, and mine is, commercially speaking, the stoppage of the sale of all amalgams. When I speak in their favor, I do so to my own loss in a money point of view, and what I do say may be taken as fair evidence in their favor.

With regard to Dr. Patrick's remarks on the DENTAL ADVERTISER, I have not the smallest interest or power in this publication. I don't pay one penny towards it, either for subscription, advertisements or any way, directly or indirectly. If, as Dr. Patrick says, this journal is principally devoted to my interests, I am exceedingly obliged to the editor, but he most certainly pleases himself and does what he chooses without fee or thanks from me. The system of paying for favorable notices so common in America has not become naturalized in this country, and any hint that I have ever directly or indirectly made it worth any editor's while to say one single word in my favor is not only an insult but a deliberate falsehood. I have no more control over or interest in the ADVERTISER than I have over or in Dr. Patrick.

THOS FLETCHER, F. C. S.

Warrington, England.

DENTISTRY IN POLYNESIA.

The dentists of the Solomon Islands, though somewhat heroic in their treatment, are said to be but little inferior to their European brethren. When a man wishes to have a tooth or two replaced, a couple of assistants hold him firmly, while the operator, propping the patient's mouth open with pieces of bamboo, proceeds down along the gum until he has cleared the surface of the jaw-bone. Into the cavity thus made along the gum he inserts a piece of tortoise-shell or mother-of-pearl of the requisite length, and then binds the gum up on each side of the new tooth with a kind of vegetable glue. After a few days' feeding on liquid diet, the wound generally heals ; and it is a common sight to see old men with almost all their teeth replaced in this fashion.—*British Journal of Dental Science.*

TO WHOM IT MAY CONCERN.

By an Act passed at the present session of the Legislature, which is hereunto annexed, such persons as can take and subscribe an oath that they were in the REGULAR PRACTICE of Dentistry in THIS STATE on the 20th day of June, 1879, are entitled to avail themselves of the provisions of this law, which was signed by the Governor on the 26th day of May last. But they must have been a Dentist in REGULAR PRACTICE in this State at that time—not a student or an assistant in some Dentist's office, nor a person out of practice; and must swear to it, and file their oath with the County Clerk, before he can allow them to register.

A. M. HOLMES,
A. P. SOUTHWICK,
L. S. STRAW,

JUNE 10, 1881.

Committee on Dental Legislation.

AN ACT

FOR THE RELIEF OF CERTAIN PERSONS ENGAGED IN THE REGULAR
PRACTICE OF DENTISTRY IN THIS STATE.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Any person who was engaged in the regular practice of dentistry within this State on the twentieth day of June, eighteen hundred and seventy-nine, and who was entitled to registration as a dentist as provided by the third section of chapter five hundred and forty of the laws of eighteen hundred and seventy-nine, entitled "An act to regulate the practice of dentistry in the State of New York," but who failed to cause his name to be registered as therein provided, and who shall make and file with the clerk of the county in which he registers, his affidavit to the effect that he was so engaged in such practice of dentistry and so entitled to registration, may, within sixty days after the passage of this act, cause his name, office and post-office address to be registered in the county clerk's office in the manner provided in said third section of said act, and such registration shall have like force and effect as if made within the time prescribed by said section of said act. Any person who shall willfully make and file a false affidavit for the purpose of procuring such registration shall be subject to conviction and punishment for perjury.

§ 2. Every person hereafter authorized to practice dentistry within this State shall, before commencing to practice, register in the clerk's office of the county where he intends to commence the practice of dentistry, in a book to be kept for that purpose, his name, office and post-office address, together with the name of the society, college or other authority from which he has received his diploma or certificate of qualification to practice dentistry.

§ 3. The clerk of any county shall be obliged upon the payment to him of the sum of twenty-five cents to make the registry of any person provided for in the second section of this act, which sum the clerk is entitled to collect and receive from the person registering.

§ 4. This act shall take effect immediately.

AMERICAN DENTAL ASSOCIATION.

At the meeting of the American Dental Association held last year in Boston, a committee of five was appointed to take into consideration the feasibility of holding an International Dental Congress. No formal report of the committee has yet been received, but in view of the fact that the International Medical Congress assembles this year in London, a movement was sometime since inaugurated to get together dentists from all parts of the world, and to form a dental section. Very much of the success of such a meeting would depend upon the action of American dentists, and unfortunately the date for this meeting fell upon the same week with that of the American Dental Association. So many leading men, however, intimated their determination to attend the London meeting, that it was found that it would seriously interfere with the success of the New York meeting, and at the request of a number of dentists who desired to attend both, the officers and executive committee of the American Dental Association have, wisely as we think, decided to change the date, and that Society will therefore meet in New York, on Tuesday, July 12th,* and remain in session four days. On the 16th a number of its members will sail on the steamer *Helvetia*, of the National Line, for London, where they expect to arrive in time for the International Congress, after which most of the American delegates will remain for a more or less extended European trip. Dr. W. C. Barrett is the only dentist of this city who will go, so far as we know.

The meeting of the American Dental Association will be held in Irving Hall, corner of Irving Place and Fifteenth street, New York, commencing July 12th. The local committee of arrangements recommends the Westminster Hotel, only one block above Irving Hall, as the best place at which dentists can stop, special rates having been arranged for, and Dr. A. L. Northrop, 41 West 46th street, will secure rooms for such as shall request him to do so.

B.

NATIONAL DENTAL ASSOCIATION.

The regular annual meeting of the Dental Association of the United States of America will be held in New York City, commencing Monday, August 8, 1881.

This Association was organized,—not in opposition to those already existing,—but to supply a want that is not met by any one of them. It is so constituted that members of the profession in all parts of the country can in turn attend its meetings and participate in its control and its benefits. All members of the profession are therefore cordially invited to attend this meeting.

R. FINLEY HUNT, *Sec'y*,*Washington, D. C.*

PENNSYLVANIA STATE DENTAL SOCIETY.

The Pennsylvania State Dental Society will meet at Point Chautauqua, Chautauqua Lake, on Tuesday, July 26th, and continue in session for three days. No doubt many New York State Dentists will attend, not solely because of the easy accessibility of the place of meeting, but on account of the great interest which attaches to the Pennsylvania State Society, and the elevated character of its papers and discussions. B.

SIXTH DISTRICT DENTAL SOCIETY.

At the annual meeting of the Sixth District Dental Society, held at Binghamton, May 6th, 1881, the following officers were elected :

President—L. E. Ireland, Oneonta.

Vice-President—E. S. Walker, Greene.

Recording and Corresponding Secretary—A. J. Wright, Owego.

Treasurer—T. B. Darby, Elmira.

Censors—A. M. Holmes, T. B. Darby, H. Hodge.

Delegates to State Society—L. E. Ireland, A. M. Holmes.

Committee on Semi-Annual—The President, The Secretary and G. H. Smith.

The Fifth and Sixth District Societies will hold a union meeting at Cortland, beginning Thursday, Oct. 5th, 1881.

A. J. WRIGHT, *Secretary*.

CHEAP DIPLOMAS.

A circular from the Wisconsin Dental College, located at Delavan, is being sent to dentists throughout the country, containing the following extraordinary announcement :

"Dear Sir:—By mail I send you the Wisconsin Dental College Announcement. Should you conclude to take a full or part of the term, we will give you practical instruction which will be to your advantage ; however, if you do not desire a College course, I take the liberty to make you this offer : Fill the blanks in the inclosed printed statement and return. If *satisfactory* to the Faculty, will send you in a cylinder box by express C. O. D. \$12.00, an elegant *Honorary* Diploma and Degree D. D. S. (Doctor of Dental Surgery), with your name artistically hand-printed. This Diploma is 22 x 17 inches, elaborately engraved on *parchment* with signatures of the Faculty and College Seal. Should you receive this compliment from the Wisconsin Dental College, we shall expect your influence by way of assisting us to students in the future.

Respectfully your servant,

GEO. MORRISON, *President*."

Accompanying the circular is a tinted slip of paper containing the following :

".....188 .

This Statement is made to the Faculty of the Wisconsin Dental College, located at Delavan, Walworth Co., Wisconsin, for the purpose of procuring an Honorary Diploma and Degree D. D. S. (Doctor of Dental Surgery.)

I am a Regular Practicing Dentist.

I am a Resident of.....

Age.....years. Have Practiced Dentistry.....years.

Signed.....

Witness....."

Now here is a splendid opportunity to obtain an elegantly engraved diploma on parchment, with your name artistically hand-printed thereon ; a degree of "Doctor of Dental Surgery ;" the signatures of the august and honorable Faculty, and the College Seal, all for the paltry sum of \$12.00. This is an exceedingly generous offer and should meet the approval of the profession generally. The terms are even more liberal than those obtained from the notorious "Dr." Buchanan of Philadelphia. Just think of it, cylinder box ! diploma ! parchment ! hand-printed name ! D. D. S. ! signatures of Faculty ! College seal ! *versus* twelve dollars ! That's all. No traveling to a distant city, no study, no examination, no "plucking," no new clothes on Commencement day, no bouquets, no good times with the boys, no headaches, nothing but twelve dollars, and the applicant is in possession of a full fledged D. D. S. which he can air to his satisfaction, if a little care is taken to conceal the spot of odium that may stick to the tail of the transaction.

Our only regret is that the Wisconsin institution was not in existence some twenty years ago, as we have a vivid recollection of a sojourn in Philadelphia, and of the expenditure of a few hundred dollars, that then seemed necessary to obtain the coveted D. D. S. Then we remember too, the fear we entertained of being "plucked" by the stern and just Faculty, and the mortification of being obliged to appear at the Commencement exercises with a well-worn suit of clothes—all this : absence from home, study, cash, fear, and mortification, might have been saved had the Wisconsin School been in existence.

Well, it's no use complaining now ; we got all we worked for then except the odium, and we don't care about the disgusting thing anyway. We would suggest, however, that the College grant the degree of A. S. S., as a fitting accompaniment to their D. D. S.

DR. THOMAS O. OLIVER in an article in *The Herald of Dentistry*, criticizing Dr. Flagg's book, makes the statement that "All metals that are put in my alloy 'at the time of making' are in it when it is sold, and

in the same proportions. I do not see how it could be otherwise, notwithstanding the intimation of the gentleman (Dr. Flagg) that it might."

We do not know as much about metallurgy as we would like, but we do know that if Dr. Oliver can produce any two samples of alloy exactly alike every time, he has succeeded in doing what no other person has accomplished. We have the authority of an eminent chemist and metallurgist, who has investigated this subject for many years in the most precise, scientific and careful manner, that it "could be otherwise" and that no two samples of alloy are *precisely* alike. The precaution has been taken by the gentleman above referred to, to reduce all metals used in the manufacture of an alloy, direct from their salts. The metals were accurately weighed, the heat required to melt the metals being registered by a thermometer, the time the metals were kept in fusion and the temperature of the ingot molds being noted, and yet with all these precautions, the resulting ingots are not all *precisely* alike. In short we have ourselves seen four out of six ingots from the same melting, condemned as not up to the required standard.

The reasons for this change are well known to metallurgists, and should be known to makers of dental amalgams. The metals may be, and probably are, in the alloy at the time of making, but the proportions are certainly changed after melting.

THE BALTIMORE COLLEGE OF DENTAL SURGERY now occupies a new building on the corner of Eutaw and Franklin streets, some three squares north of its former location. The new building is a large and handsome structure fronting on two wide streets, built of the finest pressed brick, with elaborate granite facings and ornaments, and is said to be as complete and handsome a building as any devoted to dental education in the world.

MISCELLANEOUS NOTES.

Mark Twain says there is something very fascinating about science—it gives you such wholesale returns of conjecture for such trifling investments of fact.

The reason why certain foolish men take more pleasure in low and sensual pursuits than in the higher pursuits which afford a serener if a less exciting happiness, is to be found in the fact that they are foolish, just as it is said that the donkey prefers thistles to corn simply because he is a donkey.

Dr. Dickinson, of St. Louis, recently stated before the Medical Society of that city, a case in which one of his female patients was relieved of a sudden attack of blindness by the extraction of a tooth which had been filled by a dentist. Now, this is the most astounding case we ever read of. We shall advise people in future not to have teeth "filled by a dentist." Better employ a shoe-maker or a mason, or perhaps send for Dr. Dickinson.

A German Druggist of New Orleans has invented an improved process for clarifying sugar-cane juice, to which he facetiously gives the appellation, *Chemisches Zuckerrohrsaftunreinigkeitenentfernungsschnellverfahren*. A purist suggests to use in place of the foreign word "apotheker" the German expression, *Gesundheitswiederherstellungsmittelzusammenmischungsverhaeltnisskundiger*.—*Pharmacist* (Chicago.)

Intelligent Patients.—What can be expected of ordinary people, when the following picture is actually presented in the family of a Doctor of Divinity? The D. D. has a son-in-law who is a "liberal" homœopath; "not bigoted at all;" his family have long been under the care of a homœopath; a regular, called to attend his son in a grave disease, finds on the bureau a large bottle of a quack medicine for "female weakness," and, after many inquiries, that any one might make, is asked if relief of pain in the back could not be obtained by having it rubbed by a "natural electrician."

What Next.—A recent American patent consists in providing a parlor bust of the deceased, cut in marble, and in making a hole in the back of the bust, wherein the ashes are to be deposited after cremation of the body.

A further improvement, suggested by a lady, is to prepare a wet mixture of cements for artificial stone or marble and sprinkle the ashes of the deceased into the mixture, which is then to be cast into the form of busts, statuettes or other objects. In this way various members of a family might possess enduring portions of the ashes of the departed one.

Very important discoveries are those which are said to have been made of the possibility of *storing* electrical energy. A strong practical point against the feasibility of the electrical light as compared with gas has been the supposed impossibility of accumulating the electrical power and storing it as illuminating gas is stored in a receiver. There is now, however, very high scientific authority, both French and English, as to the complete success of methods of accumulating and imprisoning the electrical force, and that America is not behind in the race of discovery may be inferred from the fact that the Patent Office at Washington reports that numerous patents looking to the same end are now pending, while almost every mail brings new ones.

People who go out for recreation, and feeling fatigued in consequence, will be rather startled to find they are in danger of bringing upon themselves an ailment likely to be exceedingly troublesome, and add to the already overwhelming number of affections quoted in the vocabulary of medical men. Thus a medical contemporary has discovered lurking amongst our fashionable throngs who frequent picture galleries, a terrible affection, which is described as involving a very unpleasant headache, sleeplessness, and nervous prostration; and that in the treatment of this disease, pot. bromid, chloral, quinine or gelseminum are useless, while alcohol is mischievous. The name of this latest of fresh maladies is "Academy Headache." We fear the title won't do. It sounds too much like fatigue, and want of rest, and people will no doubt go on picture-gazing, getting over-tired in their pleasures and amusements, without attaching much importance to the grave warning given by this writer, who says, "a repetition of such headache is not free from danger."

Suppuration in the Lower Lid, due to Dental Caries.—Parinaud's paper is a very interesting one. He thinks that alteration of the temporary or permanent teeth may provoke suppuration in the lower lid on a level with the orbital margin, or in the region of the lachrymal sac, where it simulates tumor or fistula of the sac. The course followed by the pus arising from an alveolo-dental periostitis is intra-osseous, and hence difficult to discover. He thinks that there is a variety of suppuration around the eye, of dental origin, peculiar to children, due to the arrangement of the alveoles of the first and second dentition. In the adult a suppurative process of dental origin is occasionally

met with in front of the lachrymal sac. In these cases the pus developed in the alveola may first penetrate into the maxillary sinus, where it provokes inflammation, and secondarily leads to the formation of a cutaneous fistula at the internal canthus; in another series of cases the lachrymal passages are free, the maxillary sinus is not involved, and the connection between the abscess or fistula at the internal canthus and the dental process cannot be discovered. The vascular canals which open constantly by one or two orifices upon the ascending ramus of the maxilla, in front of the lachrymal groove, and which communicate also with the foramina of the alveold, explain the occurrence of these suppurative processes, which in so many instances are accompanied by necrosis of the orbital margin.—*N. Y. Med. Journal.*

BOOK NOTICES.

PLASTICS AND PLASTIC FILLING; as pertaining to the filling of all cavities of decay in teeth below medium in structure, and to difficult and inaccessible cavities in teeth of all grades of structure. By J. FOSTER FLAGG, D. D. S.; Professor of Dental Pathology and Therapeutics in Philadelphia Dental College. With illustrations. Philadelphia: Presley Blakiston, 1881. For sale by Buffalo Dental Manufacturing Co. Price, \$3.00.

A less courageous man than Dr. Flagg would have hesitated before presenting to the profession a work of this character—not, however, that the character of the book is bad. Dr. Flagg has taken the plastic bull by the horns, and forced said bovine to the front, and sustained him in that position by a remarkably clear and *precisely* written volume. Yet, is the *practice* advocated so much different from that pursued by a majority of dentists? Dentists—and good ones too—have used plastic filling materials for years, and saved teeth by their use, and have annually denied the same at the meetings of Societies. *Their* courage failed them. But Dr. Flagg not only had the courage to face a Convention of dentists, acknowledge that he used amalgam and other plastic filling materials, and state the *reasons* why he did so, but to put his convictions in book form, that others may profit by his experience.

Now we do not wish it understood that we approve of everything contained in the book. There is too much Flagg in it, credit not being given to many other conscientious experimenters, whose products and hints are at least entitled to consideration. It is an invaluable book, however, to users of plastics who are apt to be slovenly in manipulation. If plastic materials are used at all, they should be prepared and inserted in the most precise and careful manner, and Dr. Flagg characteristically shows how this can be done.

BOOKS RECEIVED.

- CORRESPONDENZ BLATT für Zahuarzte. Berlin: C. Ash & Sons.
 LE PROGRES DENTAIRE. Paris: C. Ash & Sons.
 GIORNALE DI CORRISPONDENZA PEI DENTISTI. Redatto dal Dott Alberto Couilliaux.
 Parma: Pubblicato du C. Ash e Figlio.
 L'ODONTOLOGIA, Luigi Ribolla. Medico-Chirurgo-Dentista; Palermo.
 DENTAL OFFICE AND LABORATORY. Philadelphia: Johnson & Lund.
 BUFFALO MEDICAL AND SURGICAL JOURNAL. Buffalo, N. Y.
 JOHNSTON'S DENTAL MISCELLANY. Johnston Bros., New York.
 THE DENTAL JAIRUS. Sacramento, Cal.
 THE DENTAL LUMINARY. Macon, Ga.
 THE PHYSICIAN'S AND SURGEON'S INVESTIGATOR. Buffalo, N. Y.
 GAZETTE ODONTOLOGIQUE. Journal Officiel de la Société Syndicate des Dentistes.
 C. V. Delahaye et Cie., Paris.
 DENTAL HEADLIGHT. Nashville, Tenn.



IN MEMORY OF
JAMES ABRAM GARFIELD,

TWENTIETH PRESIDENT OF
THE UNITED STATES OF AMERICA.

BORN,

November 19th, 1831.

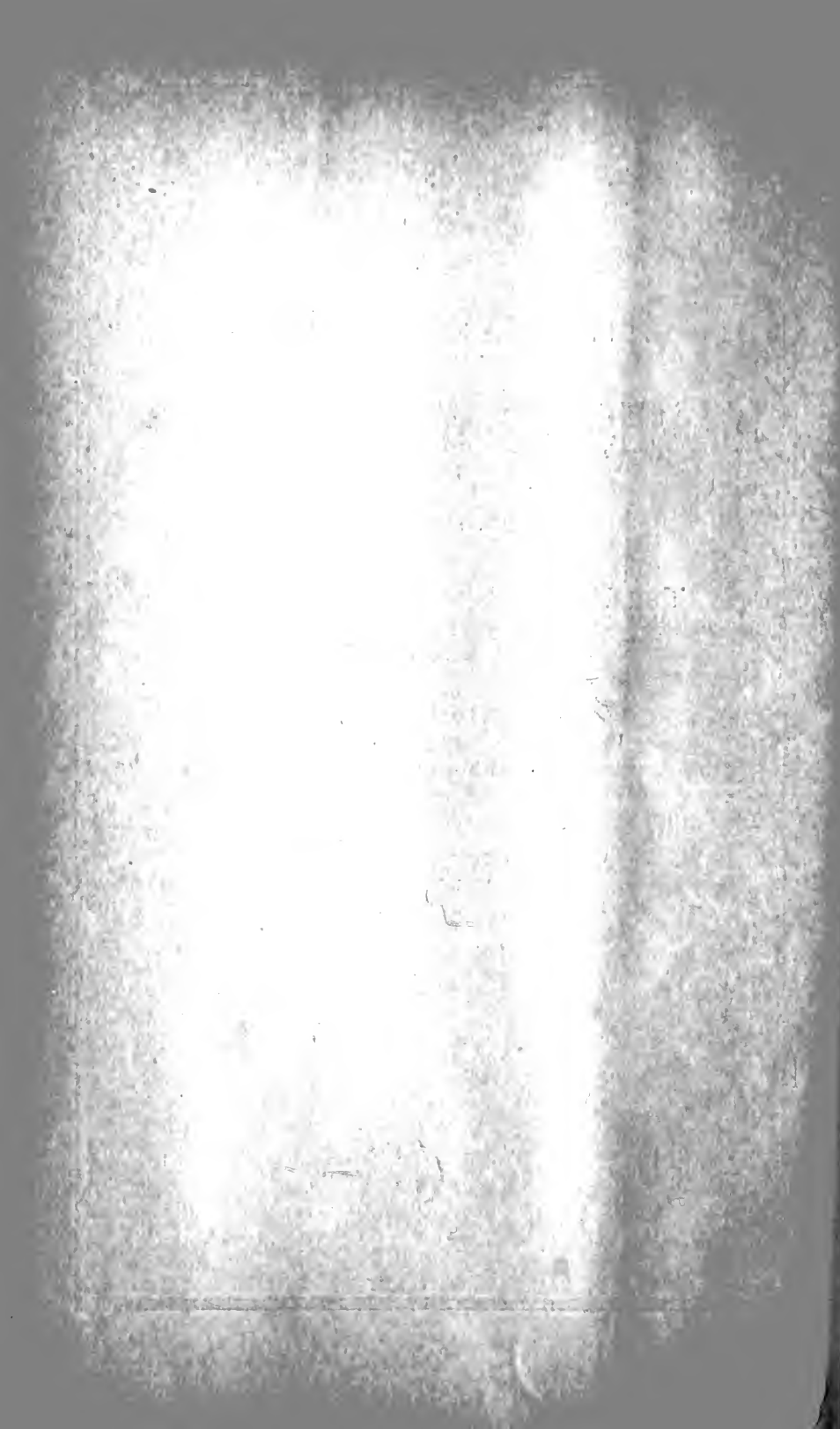
ASSASSINATED,

July 2d, 1881.

DIED,

September 19th, 1881.







THE DENTAL ADVERTISER.

VOL. XII.—BUFFALO, N. Y., OCTOBER, 1881.—No. 4.

THE INTERNATIONAL MEDICAL CONGRESS.

W. C. BARRETT, M. D., D. D. S.

The great meeting which was held in London, commencing August 2d, was undoubtedly the most momentous event of the kind which the world ever saw. Six thousand physicians were convened, and among them might have been found all those illustrious men who, in this generation, have done most to enlarge the domain of medical science. Fifteen Sections were organized, and each member attended where his special sympathies, or his particular line of study naturally led him. They were—

- Section 1.* Anatomy.
- Section 2.* Physiology.
- Section 3.* Pathology.
- Section 4.* General Medicine.
- Section 4.* Diseases of the Throat, (sub-section.)
- Section 5.* Surgery.
- Section 6.* Obstetrics.
- Section 7.* Diseases of Children.
- Section 8.* Mental Diseases.
- Section 9.* Ophthalmology.
- Section 10.* Diseases of the Ear.
- Section 11.* Diseases of the Skin.
- Section 12.* Diseases of the Teeth.
- Section 13.* State Medicine.
- Section 14.* Military Surgery and Medicine.
- Section 15.* Materia Medica and Pharmacology.

For the first time in the history of such great medical meetings Dentistry was fully recognized as a branch of the healing art, and a Section set apart for the consideration of those diseases which it is the province of the Dentist to treat ; and while our dental degree was not recognized, and none but those holding a medical diploma were supposed to be entitled to membership, yet practically, unless he himself raised the question, the medical standing of any applicant was not particularly inquired after, and all, whether the possessor of any degree or not, were able to receive their membership tickets. The transactions of other Sections will little interest the readers of *THE DENTAL ADVERTISER*, and so, in complying with the request of its Editor to give a sketch of the proceedings of the meeting, I will speak only of Section Twelve.

This Section was organized by the appointment of Edwin Saunders, the Dentist to the Queen, as President ; the Vice-Presidents were John Tomes and T. Spence Bate, and the Secretary was Charles Tomes. All of these gentlemen are well known to the profession throughout the world. The Council was composed of nineteen English, Irish and Scotch dentists of high standing. The attendance upon the sessions was usually quite large, and the proceedings commanded the respect of the whole Congress.

There was a large delegation of American Dentists present, and the impression they made was generally favorable. By far the most fluent speakers were found among them, and their usually quick, sharp, incisive remarks commanded the attention of all. I have no complete list of them, and can only give their names from memory, but I saw there Drs. W. H. Atkinson, S. G. Perry, E. A. Bogue and N. W. Kingsley, of New York ; J. Taft, of Cincinnati ; M. S. Dean and E. S. Talbot, of Chicago ; C. R. Butler, of Cleveland ; E. Parnly Brown, of Long Island ; G. J. Friedrichs, of New Orleans ; T. T. Moore, of Columbia, S. C. ; H. J. McKellops, of St. Louis ; G. L. Field, of Detroit ; J. A. Watling, of Ann Arbor, Mich. ; E. T. Darby and W. G. A. Bonwill, of Philadelphia ; M. H. Webb, of Lancaster ; Jas. McManus, of Hartford ; C. A. Brackett, of Newport ; A. M. Dudley, of Salem ; L. D. Shepard, of Boston ; C. D. Cook, of Brooklyn ; E. C. Hawxhurst, of Battle Creek, Mich. ; F. D. Stockton, of Newark, N. J., and others whom I cannot now call to mind.

Of American Dentists resident in Europe, there were : Drs. W. St. Geo. Elliott, of London ; A. A. Blount, of Geneva ; C. M. Wright, of Basle ; C. T. Terry, of San Remo ; N. W. Williams, of Geneva ; Charles Kingsley and G. C. Daboll, of Paris.

The meeting was, as might have been expected, more of a success socially than scientifically. There were but few papers that were really up to the standard of such a congress, and the discussions, while in many particulars of a very interesting character, were not as a whole what might have been expected. There was a sincere effort to shut out mere

verbiage, and such speakers as are wont to indulge in loud-sounding, cat-a-chrestic jargon and balderdash, were most unmercifully sat upon. But when so many nationalities are brought together, and when distinguished men who are accustomed to speak to those less instructed, and to occupy the lecturer's platform, meet together upon a common plane, they are apt, unless they have more of assurance than ability, each to wait for the other, while men of smaller calibre occupy the time.

One of the most notable papers presented was by Dr. Magitot, of Paris, upon "The Operation of Replantation for the Cure of Chronic Alveolar-periostitis," in which he gave the results of one hundred operations performed, ninety-two per cent. of which were successful. Dr. Finley Thompson read a paper upon the same subject which was more theoretical and less the results of direct observation, than that of Magitot.

Mr. Daniel Corbett, of Dublin, presented the subject of "Interrupted Second Dentition as a cause of reflex constitutional disturbance."

Mr. Corbett is a dentist of advanced ideas, as his paper indicated. It was my privilege to visit his office in Dublin, and I found it one of the most complete that it was ever my good or evil fortune to enter. I could easily fancy myself in a first-class American office, for nearly every instrument and appliance of importance was of American make. White and Morrison Chairs and Dental Engines, Justi's Teeth, and Buffalo Dental Manufacturing Co.'s Vulcanizers, Brackets and Saliva Ejectors, made me feel quite at home.

The subject of the cause of decay in teeth was brought up through the means of a paper presented by Drs. Underwood and Mills, upon "The Effects of Organisms Upon the Teeth and Alveolar Portions of the Jaws." This paper was illustrated by well-executed drawings and diagrams. The subject matter was, however, fiercely attacked by the American delegates and a hot discussion ensued. Dr. Gunning, of New York, had an excellent paper on "The Causes of Irregularity of Teeth," and Oakley Coles one on the treatment of such cases. Dr. Iszlai Jozsef, of Buda-Pesth, presented a technical treatise on nomenclature, etc., and Professor Owen one on the scientific status of medicine. Dr. N.W. Kingsley, of New York, read his paper on "Civilization," which was published in this country some time since. Dr. Magitot read a second paper on "The Limits of the Curability of Dental Caries."

The other papers were one by Dr. Arkövy, of Buda-Pesth, on "Experiments made upon dogs for the purpose of observing the influence of different agents used in devitalizing teeth"; one by Mr. Gaddes on "Dentistry in the Army"; one by Mr. Coleman giving the records of the experience in the use of anæsthetics in the Dental Hospital of London; one by Dr. Atkinson, of New York, on "Premature wasting of the Alveoli"; one by John Tomes on "Dental Education"; one by M. H. Webb on

"Contour Fillings"; one by M. S. Dean on "Alveolar Abscess"; one by J. Taft on "Antral Abscess," and one by Parnly Brown upon "Contour Restoration of the Central Incisors." In addition to these, Section Twelve held one joint session with Section Seven, to consider a paper presented in that Section by M. Perrot, upon Syphilis, and the Erosion of Teeth.

There was no lack of subjects for discussion, nor of papers and essays, the best of which the readers of our Dental Journals will no doubt have a chance to peruse. Some of the essays had a scientific value, but a number of those presented, among which I am sorry to say was more than one of American authorship, were but mere collocations of the ideas and thoughts of others; eloquent, perhaps, but not learned.

But if from a scientific standpoint the meeting was of less interest than might have fairly been anticipated, socially it was a most remarkable success. This was assured by the commencement formalities, for when in England royalty condescends to patronize any undertaking, he would be a bold man indeed, who attempted to stand out against the sentiment sure to be created. The opening ceremonies of the Congress, in Great St. James Hall, Regent street Quadrant, were very brilliant. None but those holding membership tickets were admitted to the auditorium, but upon the stage the highest dignitaries of England and other countries were congregated. Sir James Paget, physician to the Queen, presided, and he was supported on the one hand by the Prince of Wales, who formally declared the meeting open, and upon the other by the Crown Prince of Germany, while the Archbishop of York directed the religious part of the pageant. Entertainments of the most elaborate kind were frequent, there were excursions to points of interest every day, while all places were open to the members of the Congress, and they were the lions of the hour. Among the grandest of the entertainments given were the *Conversazione* at South Kensington Museum, the Banquet of the Lord Mayor of London at the Mansion House, the reception given by the Lord Mayor and corporation of the City of London at the Guild Hall, the garden party of the Baroness Burdett Coutts, and the Dinner at the Crystal Palace.

Section Twelve was especially fortunate in the reception by the President of the Odontological Society, and by dinners given by Mr. Tomes, Mr. Turner and others.

Many of the delegates employed the hours between the sessions in visits to Guy's, London, St. George's, St. Mary's, St. Thomas', St. Bartholomew's, Westminster, Bethlehem, King's College, University College, Middlesex, Charing Cross and the Dental Hospitals. Of course the sights of the great city of four million inhabitants took up some time, and between all them the week and more of the meeting came all too soon to an end. After finishing the sight-seeing the American delegation dispersed, some

returning home, some going direct to Paris, others proceeding to Wiesbaden in Germany, for the purpose of attending the annual meeting of the American Dental Society of Europe, concerning the doings of which, with the grand dinner given in our honor, I may have something to say at a future time.

Personal friends may possibly like to know something of our personal doings. The small party of which I was a member, and which had sailed from New York by the Inman steamer "City of Chester," landed at Queenstown, and proceeding from there via Cork and Blarney Castle to Killarney Lakes, had traveled quite extensively in Ireland, and "done" a part of England before the meeting. After the close of that a few of us sailed for Rotterdam, visited Holland and Belgium, and thence to Germany, going up the Rhine from Cologne to Bingen and Bieberich, thence to Wiesbaden and the wine districts, and visiting the baths of Baden-Baden and Schlangenbad. At Mayence the writer separated from the rest, they going direct to Paris, he proceeding north via Heidelberg, Strasburg, and Friburg, to Switzerland, entering at Basle and going via Lucerne, the Brunig Pass and Interlaken to Geneva, thence across France via Dijon and Sens to Paris, where the party was again united. After a week spent here, accompanied by Drs. Field of Detroit, and Moore of Columbia, S. C., he returned to London, went from there to Scotland, where we visited the principal points of interest, and finally rejoined the whole party at Liverpool, passing through western England, and visiting the English Lakes. Here ended our travels in Europe, after a vacation long looked forward to, keenly enjoyed, and which leaves a fund of pleasant recollections sufficient for a lifetime.

THE BUG THEORY OF DENTAL DECAY.

A little boy saw the decaying carcass of his pet spaniel whose spirit had departed in search of the regions where good dogs go. "No wonder Trip died when he had all those worms in him," was his assenting remark on seeing the millions of maggots devouring Trip's remains.

That little boy grew to manhood, and has become a full-fledged dentist—indeed he is a regular dentologist. And now he puts on his glasses, looks at a decaying tooth, and sees vast flocks of lively leptothrix, large herds of bouncing bacteria, well organized congregations of musical micrococci, and, true to the reasoning of his boyhood, he sighs, "Poor little tooth! no wonder you are destroyed, with all those big buggers biting you."

At a meeting of the New York Odontological Society, February 15, 1881, Dr. F. Y. Clark read a paper on "Bacteria," which gave rise to

some discussion. It is not the present purpose to discuss the paper, so much as to notice some points in the discussion.

Professor Abbott expressed views in opposition to the germ theory of decay, believing that though leptothrix, etc., are found abundantly in decaying teeth, yet that it has not been shown that they play any part in causing decay. They "present themselves in large numbers, and thrive as soon as decomposition of the tooth substance begins." Prof. A. further claims, and correctly, that dental decay begins by the dissolution of the lime salts by an acid. But we are sorry to see such indefiniteness of expression, not only with him, but with others as well, who hold to the correct, in opposition to the germ theory. "An acid"—will tannic acid, gallic, or silicic acid dissolve the lime salts? And, besides, dental decay is often much more than solution of the salts.

But the cause of true science is not aided by indefinite and unguarded expressions, such as made by another esteemed member, who says, "The cause of decay has been long understood." How long? The writer of this has not been long in the profession, and when he came into it, his first question was, "If dental caries is caused by acids, what acids?" and not a man in the dental profession could answer. Our friend's statement (see page 319, vol. xxiii, *Dental Cosmos*) is entirely too crude to be satisfactory. He says the cause of decay "is no secret to those of sense possessed, and is shown by the simple chemical experiment of immersing an egg in vinegar. This will tell the whole story." But it tells nothing but that vinegar is a solvent of egg-shells, which is not an important fact. Nothing like any of the varieties of dental caries can be thus produced. Acetic acid (the active principle of vinegar) can produce, when nascent, one variety known as "chemical abrasion." He goes on to say that, "Dental decay is the dissolution of lime salts by the presence of an acid, and the progress of the decay is according to the measure of its strength." Now, the indefiniteness of this statement shows that if the cause has been long understood, it is, however, not yet understood by our friend who is speaking, unless he is misreported, which is probable. He seems to ignore the fact that dental decay is not a unite—that we have to deal with at least four varieties of it. And in some of these the process is much more than the dissolution of the lime salts, as in "white decay," and "chemical abrasion." And the progress of the decay is more influenced by the nature of the acid producing it, than by the "measure of its strength." For example, black decay, caused always by the action of sulphuric acid, can never progress as rapidly as white decay, which is always caused by nitric acid, let the measure of strength be what it may. Then how unguarded and useless the expression, "I declared to this society years ago that teeth are but organized lumps of lime!" Let him look at a tooth affected by the most common variety of dental caries—that caused

by hydrochloric acid—and he will find the cavity full of tooth substance which bears no resemblance to lime. But further, and worse, he says, “Decay, when produced by a direct or highly acute acid, is very white.” This shows an entire want of a knowledge of the nature of dental decay; for it is always produced by a “direct acid,” and always by a “highly acute” one, for the acting acid is always in its nascent state when producing decay, and is, therefore, as acute as it is possible for it to be. But decay is “very white” only when caused by nitric acid. And our good brother concludes by telling us, “We (he) understand this very well; we should be very obtuse, intellectually, if we did not.” But would he allow us to ask for one more witness, before assenting to his statement? We understand it only tolerably well, and it cost more time, study, experiment, research, waste of health, etc., than any other subject that ever attracted our attention. Judging by our own experience, we think our good brother will find necessary, at least ten years of diligent investigation, before he “understands this very well,” unless he appropriates the maturer thoughts of those who have gone before him.

But our friend who advocates the germ theory demonstrates that he has not studied the chemical theory of decay. He asks, with an air of triumph, “How is it that teeth decay in mouths where no trace of acid is found, but where the fluids are alkaline?” But the alkaline state of the oral fluids is always a strong indication of the very worst form of dental caries; for in a large majority of such cases, if not all, the alkalinity is due to ammonia, and if ammonia is exposed to oxygen, free, or in a compound easily decomposed, nitric acid is formed, as uniformly as water flows downward. Oxygen is always present in the mouth; and it is to be borne in mind, not that nitric acid may, but that it must be formed where ammonia is present; and that the resultant, nitric acid, being nascent, cannot fail to produce “white decay,” if teeth are present.

Our germ theory friend, too, tells us that “It is impossible to account for all the different shades of caries on the acid theory.” But he says this because he has not duly investigated the acid theory. Nothing known can dissolve out the lime salts and leave the gelatin, as in the most common decay, but hydrochloric acid. Nothing but nitric acid can produce all the phenomena of white decay. Sulphuric acid naturally causes all the properties and peculiarities of black decay; and it alone can do it. Chemical abrasion is caused by an agent that dissolves the organic and inorganic materials of the tooth with equal facility—the one exactly as readily as the other; and this can be done by lactic and by acetic acids, and by no other known agent.

In concluding, let us try to help and bless our good brother, Professor A. He says, “The slower the decay the more the discoloration; the more rapid the decay the less the discoloration. Where this pigment

comes from we do not pretend to say ; but that it is contained in the organic substance of the tooth there can, in my opinion, be no question," etc.

The leaves of the forest fall. As soon as they have lost vitality, slow combustion (oxidation) acts on them. The carbon is the last element to burn. Left to itself, and uncrystallized, carbon is black. The same process takes place on the organic matter of the tooth, and if time is given, it becomes noticeable. As in black decay, the color is due to animal charcoal, more or less mixed with other substances.

We regard the immediate causes of decay as the most important question in the dental science. And when we came into the dental profession and found that nobody knew, even though there are but a few varieties of decay, we felt ashamed of our profession, and we gave ourselves no rest till this question had been satisfactorily solved. We are surprised that, even yet, there is so much indefinite thought on the subject. But it often happens that great truths travel slowly. This is our apology for the frank remarks here made in reference to the discussion of the subject, at the meeting referred to. They must not be construed as in any manner personal. The discussions are published, and are, therefore, public property. It is not probable they do full justice to the speakers ; but it is with their teachings we are now concerned.—*Ohio State Journal of Dental Science.*

ON THE DIFFERENT FORMS OF ATROPHY OF THE TEETH.

BY M. PARROT, PARIS.

Extract from a paper entitled "Hereditary Syphilis as the Constant Cause of Rickets," read before the Section of Diseases of Children of the International Medical Congress, on Friday, Aug. 5, 1881.

The effects of hereditary syphilis on the teeth, though less common than other signs of the disease, are far more lasting, persisting for centuries after the death of the individual, and bearing testimony to the great antiquity of syphilis. The lesions present themselves almost with mathematical accuracy, not only in the way in which the different teeth are affected, but also in their chronological relations. The different modifications, all of which may be classed under the common term of atrophy, are as follows :

1. Cupuliform atrophy.
2. Sulciform atrophy.
3. Atrophy of the cusps.
4. "Atrophie en hache" and
5. Hutchinson's atrophy.

The first, which is by far the most common form, especially attacks the permanent incisors. It is characterised by small superficial depressions, rarely isolated from each other, and almost always disposed in horizontal lines in the crown. The second variety appears in the same situation as the first, but in the form of parallel furrows. *Atrophy of the cusps* attacks all the teeth, but chiefly the first molars, and the permanent canines. It causes a division of the crown into two distinct but unequal portions. The portion furthest from the gum is smaller than normal in all its dimensions, is irregular, with pointed cusps, and seems, as it were, set in the lower portion. The above three varieties are often found in the same tooth, they are the result of pathological modifications of the dentine and enamel, and date from the intervalveolar period of dental development.

The fourth and fifth varieties, on the other hand, do not make their appearance until after the eruption of the teeth, and are the result of caries or detrition of parts predisposed to these changes by reason of a congenital alteration in the enamel. "*Atrophie en hache*" only occurs in the upper incisors. For a certain time the portion nearest to the gum is only eroded, and as the cutting edge remains intact, the appearance of a steel hatchet is produced. In *Hutchinson's atrophy*, on the contrary, the part attacked is the central portion of the cutting edge of the incisors which is rapidly worn away owing to the thinning of the enamel. Hence results a notch of variable depth, and triangular or crescentic in shape.

Atrophy may attack all the teeth with the exception of the second and third molars and the permanent bicuspid. Its existence in patients, the subjects of hereditary syphilis, together with the coincidence between the time of its evolution and the active period of that affection, entitle me to refer it to that cause and authorize me in refusing to accept—if not absolutely, at least in the vast majority of cases—any other etiology. As a matter of fact the infantile pyrexia, of which so much has been said, do not as a rule make their appearance until after the second year, when the formation of the teeth is already complete; and as for the convulsions which, in the eyes of M. Magitôt and his pupils, play such an exclusive part in the etiology of erosion, I reject them altogether. First, because in the majority of cases the alteration has been produced or at any rate has commenced during intra-uterine life, the neuropathic accidents of which are unknown; secondly, because the intensity and the depth of the lesions, while accurately corresponding to the duration and intense action of hereditary syphilis, cannot be made to square with the relatively short period during which the eclamptic attacks occur; and finally, because the two last molars are never attacked, a phenomenon easy of explanation, on my theory, the activity of the syphilitic poison having spent itself by the time these teeth are developed, but entirely contradictory to the opinion

of M. Magitôt, since convulsions are far from being rare at that period of infantile life.—*British Journal of Dental Science.*

REVELATIONS UNDER ETHER.

BY TOM BIRD, M. R. C. S.,

Instructor in the Use of Anæsthetics to Guy's Hospital.

My first case of mania ether was that of a man between forty and fifty years of age, who had undergone a simple operation for which he required to be deeply anæsthetised. Chloroform was denied him—reason unassailable. Gas and ether had been used, the operation lasting from ten minutes to a quarter of an hour. For two hours he literally confessed; as he expressed it in the evening—"I knew what I was saying perfectly. I knew that I ought not to say it, but I could not help it, and you ought not to have left her" (the nurse) "in the room." He was right, but I did not know why, until I met with my second case some eighteen months afterwards. It was that of a young married woman, a hospital patient, whom I saw from half an hour to three-quarters after the operation. She was recounting to her mother (not present), in the clearest tones, subject-matter that I do not think she would have ever confided, if conscious; it was a subject that had evidently been laid by in memory. For a quarter of an hour I tried to divert in every way her attention to her present condition, insisting that her mother was not present, without the slightest avail; she was totally oblivious of everything but her story. The patient was a lady of education and refinement, and her language had not the slightest fault in its expression, but her bedroom was a "Palace of Truth."

There is not the slightest connexion between the symptoms of these two cases and the ramblings of chloroform, which are disconnected, illusory, and easily diverted, occurring mostly during administration; or the gibberish of methylene bichloride, the latter is not even noisy; but this ether mania is a noxious thing, and the lesson I would draw is that the patient should be left only in the care of a discreet and responsible nurse until all self-control returns.—*Lancet.*

"WISCONSIN DENTAL COLLEGE."

The following resolutions in regard to the so-called "Wisconsin Dental College" were adopted by the Wisconsin State Dental Society at their last meeting:

Your committee, instructed one year ago to investigate the "Wisconsin Dental College," and after having procured considerable evidence,

examined the articles of its corporation and the laws of the State concerning its validity, find and herewith present legal opinion to confirm : That in all the moral crookedness brought to light that institution has not exceeded the limits prescribed by the statutes ; but that it has violated all precedents of true professional integrity and uprightness by simply resolving itself, for pure mercenary ends, into a diploma manufactory, without any just regard for right or honor.

We herewith submit evidence, documents and legal opinion on this subject, and present the following preamble and resolutions recommending their adoption, to wit :

Whereas, It has come to our knowledge that certain men of doubtful professional standing have taken advantage of the lax law of the State of Wisconsin, Chapter 86 of the Revised Statutes of 1878, to prostitute to their private interests the privilege granted them ; and,

Whereas, Ample proof in the shape of documents, circulars and signatures has been placed before us that an institution incorporated under said law, calling itself the Wisconsin Dental College, situated at Delavan, Walworth County, Wis., has been offering for sale—for money only—diplomas conferring the degree of D. D. S., Doctor of Dental Surgery, thereby cheapening and lowering the dignity and standing of the dental profession in the estimation of the public, and endeavoring to place incompetent men before the people on a par with men of knowledge, dental skill and experience ; therefore,

Resolved, That the Wisconsin State Dental Society denounce such action as unprofessional, dishonest, and, so far as it succeeds, injurious to all concerned or affected by it : therefore, refuse to recognize or place any value upon all diplomas issued by said so-called " Wisconsin Dental College."

Resolved, That the Secretary be instructed to forward, for publication, to the different dental and medical journals of this country a certified copy of this action of the society.

INTERNATIONAL MEDICAL CONGRESS.

The following, according to *Punch*, were the proceedings of this learned body, and as near as can be ascertained from parties who were present, it represents the social aspect of the affair in a pretty correct manner : First day : Grand banquet. Interesting experiments with various wines. Confidential exchange of experiences after the third bottle. Second day : Grand dejeuner. Surgical operations on cold fowls and raised pies. General investigation of "mixing." Valuable results obtained by taking a combination of champagne, sherry, port, claret, pale ale, and chartreuse vert. Third day : Garden party. Examination of the action of the muscles in the game of lawn tennis. Close study of strawberries and cream and champagne cup. Supper experiments at the Albion. Extempore lecture upon the benefits to be derived by taking whisky and water internally before going to bed. Fourth day : Select dinner party of savants interested in food. Careful consideration of the effect upon the

system of turtle soup, curried whitebait, canvas-back ducks, and an entirely new and original with-your-cheese-pick-me-up made of sardines, olives, truffles, cayenne pepper, tomatoes, capers, herring roes, fowls' livers and tarragon vinegar. Human capacity for absorbing champagne in extra large doses practically tested. After the experiments a long consultation with the police. Fifth day: Psychological picnic. Exercise of the nerve power of the lower limbs to the sounds of a military band. Interesting operation of a quadrille, a polka and a waltz. Day finished with a scientific supper. Preparations of different kinds of meats. Practical lectures upon the anatomy of the fowl, the duck and the turkey. Experiments in wine temperature. Claret seventy and champagne four degrees below zero. Perambulating difficulties and optical delusions. Exercise of the vocal chords. Subject, "We Won't Go Home Till Morning." Sixth and last day: All the foreign physicians ill in bed, sending for all the English physicians. General prescription: Large doses of soda water.

TO WHOM IT MAY CONCERN.

At the last meeting of the Dental Society of the State of New York, the undersigned were appointed a Committee with positive instructions to commence suits against violators of the dental law. It is desired, therefore, that all cases of persons who shall attempt the practice of dentistry without a proper registration, of students in dentistry or others illegally registered during their pupilage, or without pupilage, and who shall attempt the practice of dentistry under shelter of such registration, of persons practicing under the pretended authority of a fraudulent diploma, or of unqualified persons who attempt to practice under cover of the name of a registered dentist, be at once reported to this Committee, together with the names of persons who may be summoned as witnesses.

The Committee will at once begin one or more suits if they be properly presented.

W. C. BARRETT,	} COMMITTEE.
A. P. SOUTHWICK,	
<i>Buffalo.</i>	
FRANK FRENCH,	
<i>Rochester.</i>	

MISCELLANEOUS NOTES.

It is frequently the case that a well-dressed man, wearing diamond jewelry, will request his dentist to use the cheapest possible material; and a majority of women will spend more money in one year with their milliners than they will with their dentists in ten years, and still feel the tax of the dentist the heavier of the two.—*Dr. John F. R. Patrick.*

Early Maternity.—Few cases have been reported of maternity having occurred as early as in the famous case of Carus. Dr. Henry Dodd (London *Lancet*, April 5, 1881,) reports a case of a child who began to menstruate when twelve months old, and became pregnant at the age of eight years and ten months. Whether or not this precocity is not an atavistic tendency may be readily asked, as it occurs most frequently among the lower races. Dr. Henry Dodd's case is a well authenticated one, as he delivered the girl's mother of her, nine years and five months previous.

Physiology for fools.—Under the above very apt caption the *British Medical Journal*, April 2, 1881, discusses some very absurd statements and actions of that clerical mountebank, the Reverend Joe Cook. In sight of a large audience in Scotland the reverend physiologist poured alcohol on the white of an egg and held up the result in a few minutes as a representation of the moderate drinker's brain. After a longer interval the hardened mass was exhibited as an illustration of a drunkard's brain. In defiance of all modern knowledge, the reverend gentleman stated that the ingestion of alcohol produced scars on the cerebrum of the living human being. Such antics and ignorance as this do the greatest injury to even the most just cause.—*Chicago Medical Review*.

The action of the State Dental Society of Wisconsin, in regard to the Dental College (?) at Delavan, was tersely summed up in a set of resolutions adopted unanimously by the convention at their recent session in Milwaukee. The convention refuses to recognize or place any value upon any diploma or degree issued or furnished by the so-called Wisconsin Dental College; the convention hold in contempt the authors and managers of this concern, who have by their action, brought odium upon the profession of this State, and furthermore will admit no person connected with the college to their society in the future. The unanimous adoption of these resolutions is an emphatic endorsement of the course of Dr. Palmer, by whom the gentlemen with the bogus diplomas were hoisted out of the convention.

A New Use for Carbolic Acid.—Recently a ship load of coolies, numbering nearly three hundred, was approaching the American shores. For some reason the coolies got into an altercation, being divided into two almost equal factions. The fight became bitter and bloody, every movable piece of the ship's furniture being used as a weapon. In this extremity the captain concluded to try carbolic acid as an anti-pugilistic. He knew that should fire-arms be used and some of the coolies killed that he and his small crew would suffer at the hands of the survivors. In accordance with his determination a quantity of strong carbolic acid was thrown in among the rioters. The effect was almost magical. Under the soothing influence of the drug the passions of the enraged celestials cooled and they soon ceased fighting and devoted themselves exclusively to the acid.

New Style of Dentistry.—Yesterday, a Genoa man called at the office of a dentist in this city, and requested to have a painful tooth extracted. The sufferer was placed in a cane-bottomed operating-chair, and the dentist stuck the forceps into the patient's mouth. No sooner did the latter feel the cold steel touch his tooth than he firmly closed his mouth, thereby preventing the dentist from accomplishing his object. This was repeated several times with similar results. Finally, the dentist got disgusted with his subject's timidity, and he stationed an assistant, properly instructed, with a long darning-needle in his hand, at the back of the chair. At the same moment the dentist's forceps entered the patient's mouth, the assistant ran his needle through the cane-seat into a fleshy part of the sufferer's anatomy, resulting in a loud yell from him, and at the same instant the tooth was yanked out. "My heavens, doctor!" cried the relieved man, tenderly rubbing that part of his body the needle had entered, "I had no idea that the root of the infernal tooth ran down so low."—*Carson Appeal*.

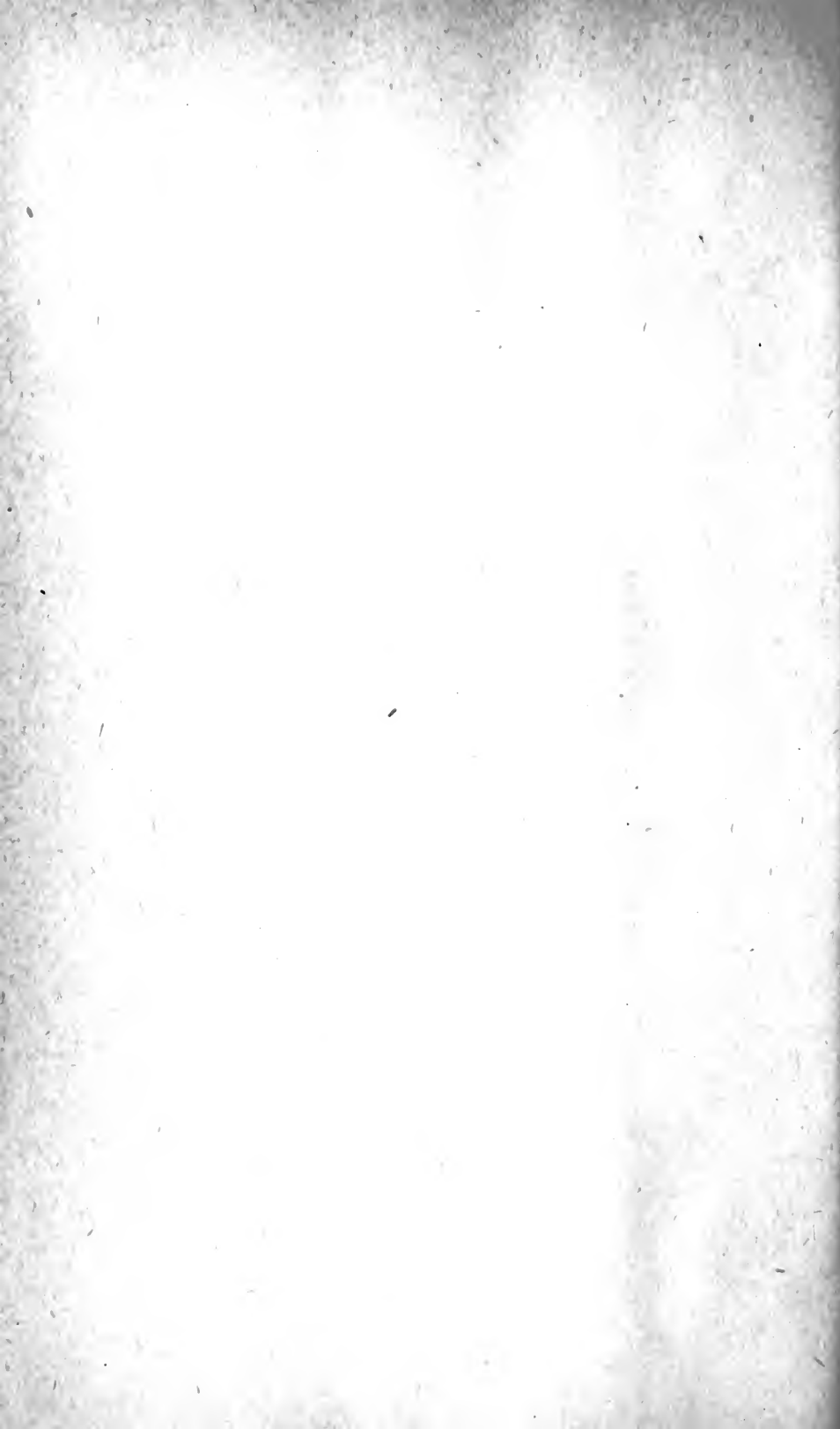
A New Infectious Disease.—The Michigan *Medical News* quotes from a local paper the following: "There were fifteen pairs of twins born in Port Huron during the present year, and hundreds of families who have been exposed are anxious lest the disease be contagious."

The latest novelty in attempts at suicide comes, of course, from Paris. A workman having quarreled with his wife, withdrew to his room, seized a poniard, the blade of which was ten centimetres long, took a hammer, and putting the point of the poniard to the top of his head, drove the blade home with a blow. Instead of dropping dead, as one would suppose, the Frenchman, it is declared by the *Siecle Medicale*, experienced no unusual sensation, either mental or physical. He thereupon endeavored to extract the poniard, but though he tugged hard he tugged in vain. Doctors were sent for, who found themselves unable to extract the poniard. "The man," we read, "was ultimately taken to a workshop in the neighborhood, accompanied by the medical gentlemen, and here he was seated on the floor, held down in a sitting posture by two persons, whilst mechanical force was used to draw the weapon from the skull." This operation having been successfully performed, he was sent to St. Louis Hospital, and kept there a week. He was then sent home to muse, perchance, over some surer means of taking his own life than burying a poniard in his brains. Scientific men, we learn from the *Siecle Mediceale*, are racking their heads over the problem this singular case presented.

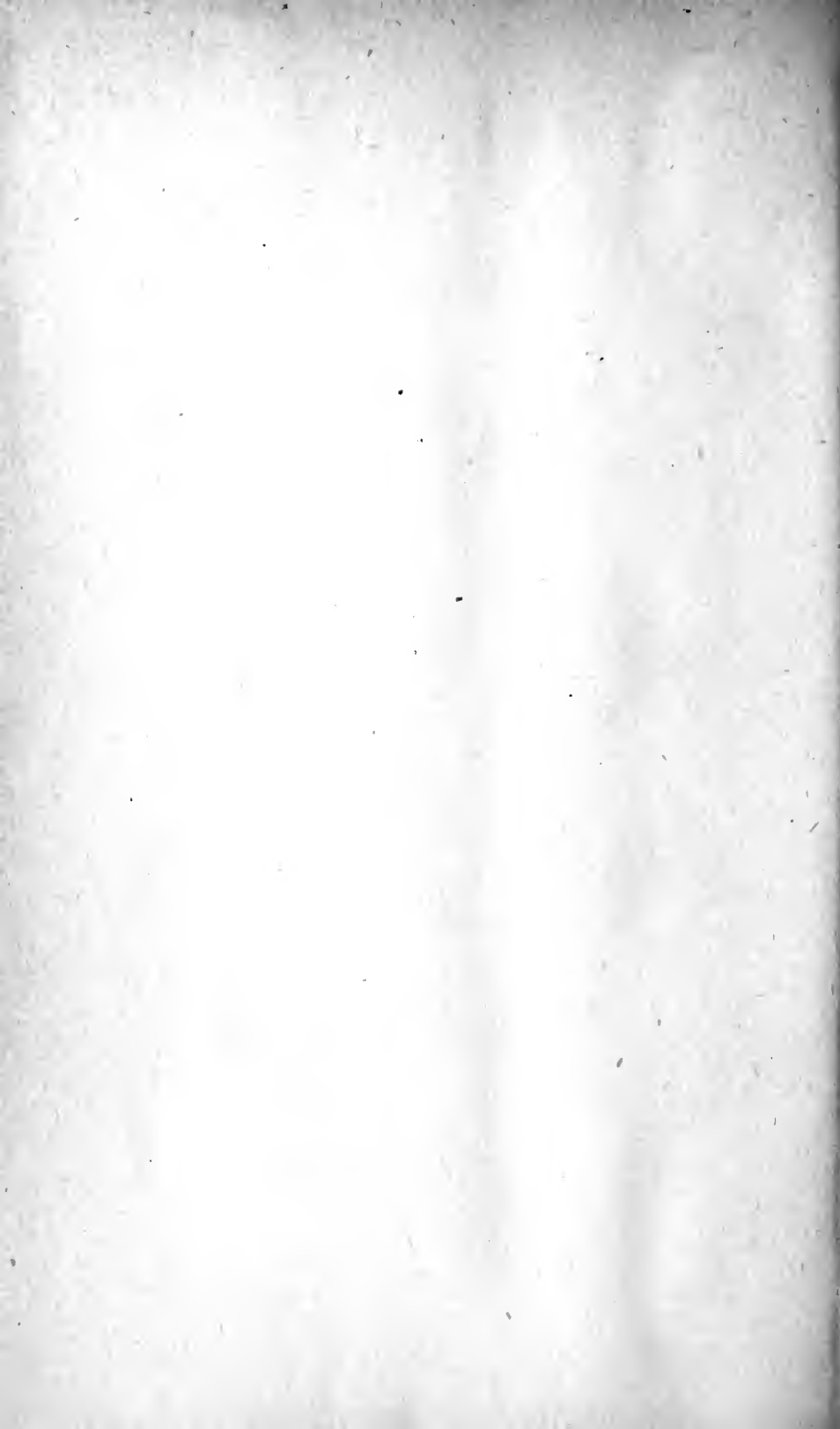
DENTAL PATENTS.

ISSUED FOR THE QUARTER PRECEDING THE DATE OF THIS JOURNAL.

- 243,105—July 21, 1881.—FORCEPS FOR DENTAL WEDGES.—Rolla M. Chase, Bethel, Vt.
 243,517—June 28, 1881.—DENTAL ARTICULATOR.—Henry L. Crittenden, Northfield, Minn.
 244,819—July 5, 1881.—APPARATUS FOR FORMING DENTAL PLATES.—Robert J. Victor, Hudsonale, Pa.
 244,031—July 12, 1881.—DENTAL VULCANIZING FLASKS.—John S. Campbell, New York, N. Y.
 8,445—July 12, 1881.—[Trade Mark] DENTIFRICE.—Theodore Egensdorff, Leavenworth, Kans.
 244,487—July 19, 1881.—DENTAL CHAIR.—Anthony W. Ross, Florence, S. C.
 8,498—July 19, 1881.—[Trade Mark] DENTIFRICE.—S. R. Van Duzer, New York, N. Y.
 243,989—August 2, 1881.—APPARATUS FOR THE MANUFACTURE OF BASES FOR ARTIFICIAL TEETH.—Joseph Duchesne, Marseilles, France.
 245,051—August 2, 1881.—TOOTH POWDER BOX.—Henry Bell, St. Louis, Mo.
 245,585—August 9, 1881.—TOOTH BRUSH.—Roger S. Tracy, New York, N. Y.
 245,607—August 16, 1881.—DENTAL PLATE.—James Bryant, Indianapolis, Ind.
 245,783—August 16, 1881.—ARTIFICIAL TOOTH.—Henry W. F. Büttner, New York, N. Y.
 245,855—August 16, 1881.—DENTAL BRACKET TABLE.—William N. Morrison, St. Louis, Mo.
 245,862—August 16, 1881.—DENTURE.—Etienne Bauzerot, Paris, France.
 246,234—August 23, 1881.—DENTIST'S VULCANIZING FLASK.—Eli T. Starr, Philadelphia, Pa.
 246,934—September 13, 1881.—TOOTH BRUSH AND CASE.—Isaac N. Arment and Allen G. Scott, Dayton, Wash.
 246,981—September 13, 1881.—DENTAL PLUGGER.—Thos. D. Shumway, Plymouth, Mass.
 246,986—September 13, 1881.—APPARATUS FOR MANUFACTURING METALLIC PALATES FOR ARTIFICIAL TEETH.—Robt. Telschow, Berlin, Germany.
 247,012—September 13, 1881.—TOOTH BRUSH.—Louis Chevallier, Brooklyn, N. Y.







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